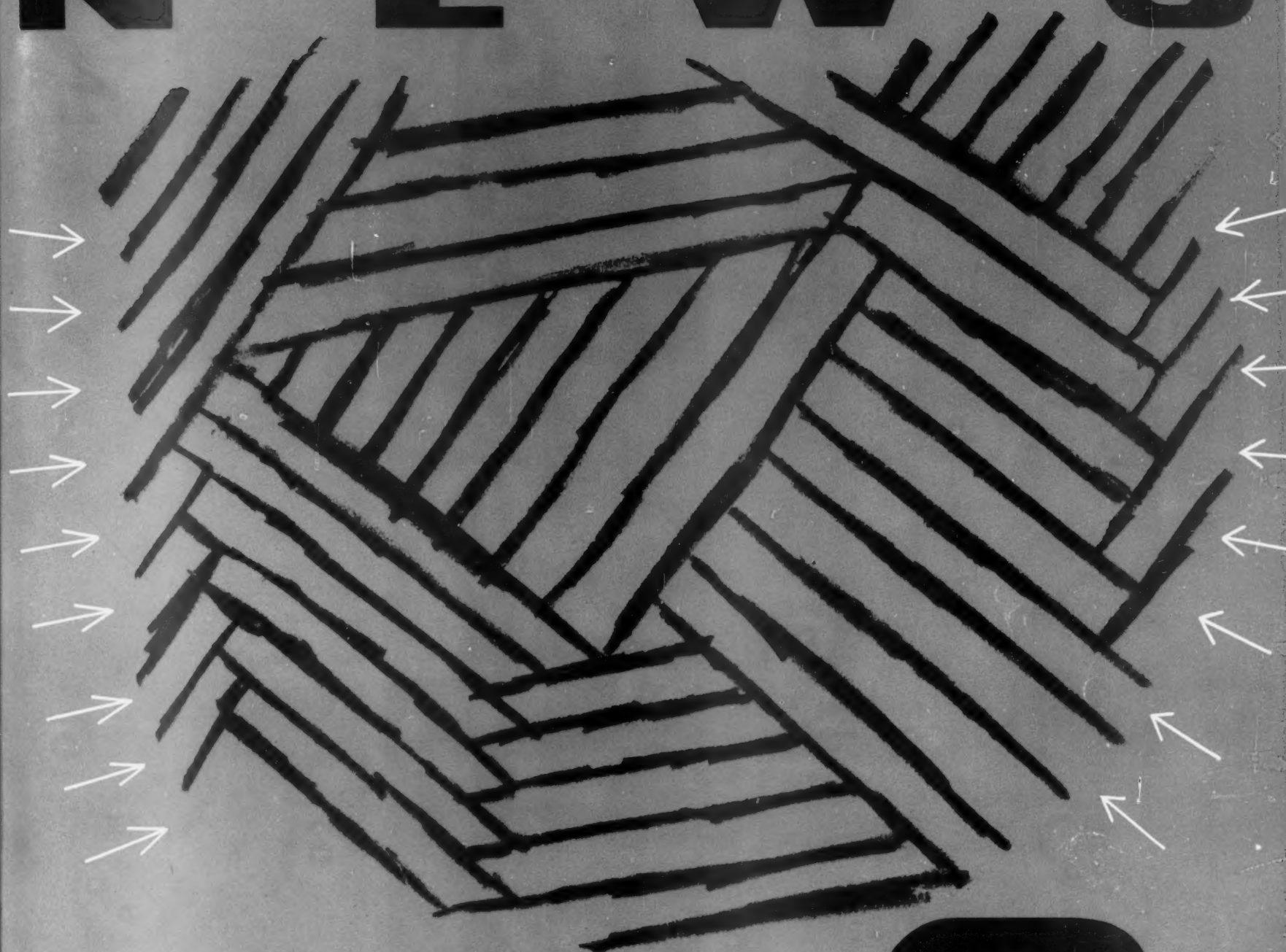


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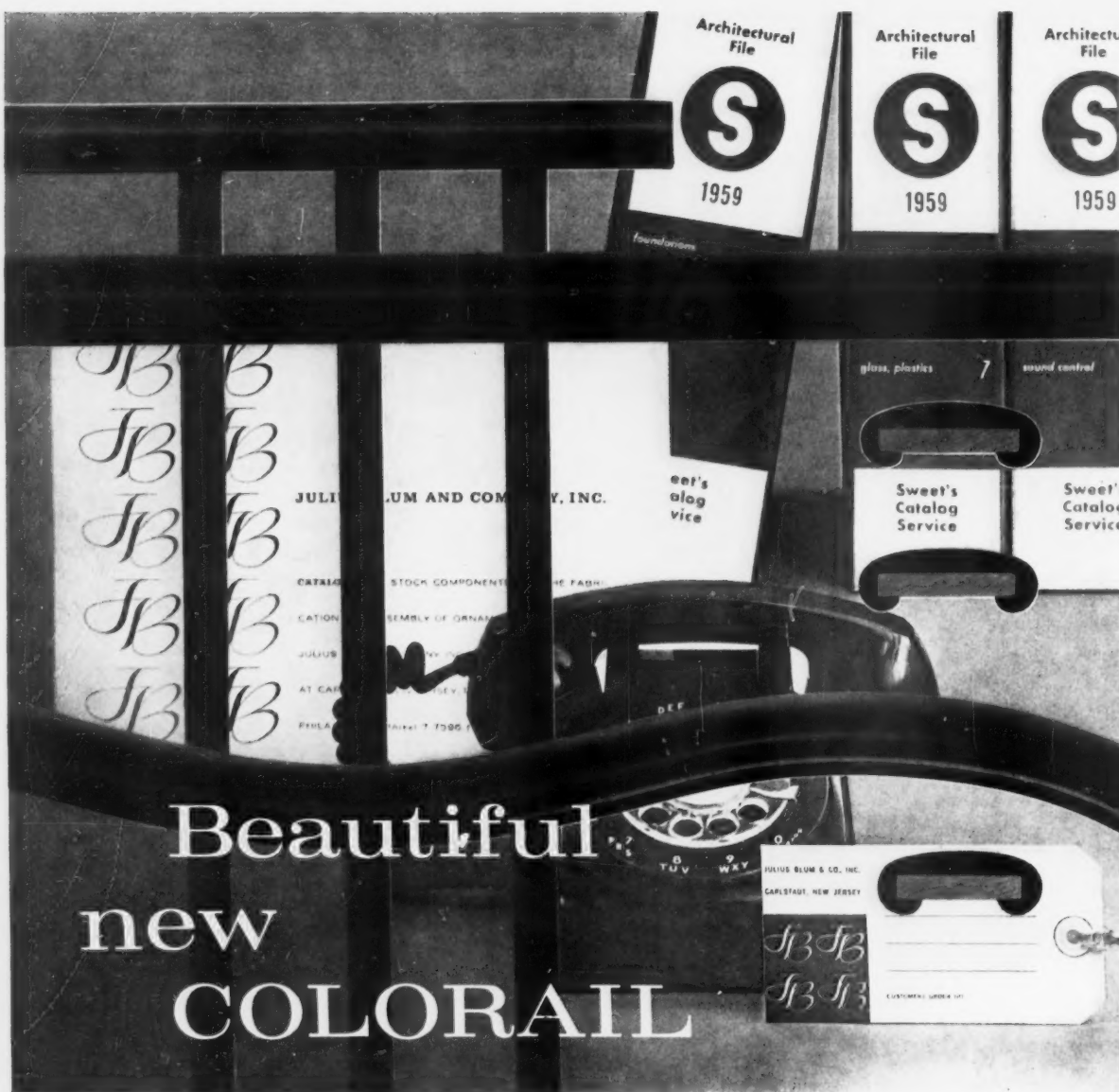
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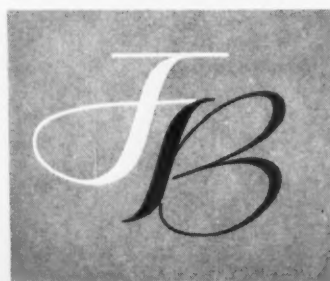
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For this month's cover, the earth symbol and force arrows have been utilized by Bob Gill to interpret the action of two fundamental design disciplines: architecture and engineering.

2

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13 Editorial

6 Forecast

8 Floating barge foundation

10 School dollars: facts or frills?

4 A/E news

14 Communications

15 Products, equipment, materials

29 Preview: 2

31 Literature

36 Names

37 Books

39 Digest: 2

41 Calendar

40 Index to advertisers

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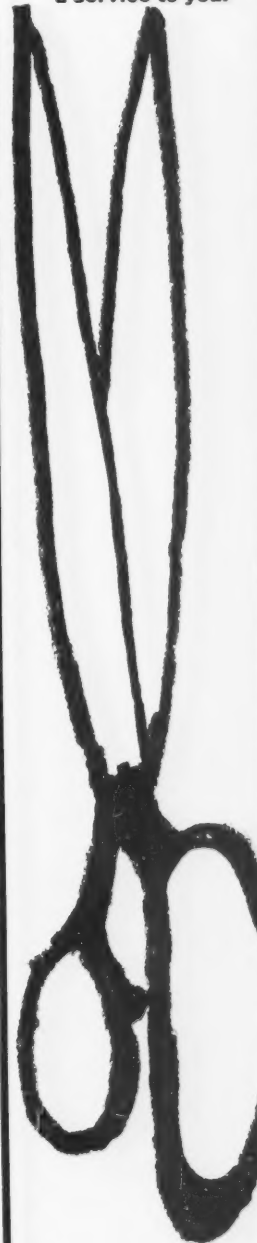
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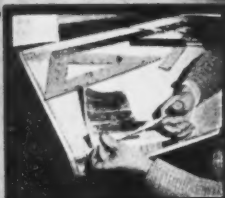
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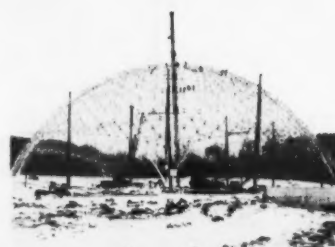
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Glass tower

New York City will see, in late February, the completion of the Corning Glass Work's new 28 story office building. Built on the site of the old Hotel Langdon, the structure is the first on upper Fifth Avenue to be set back from the property line. The project includes a reflecting pool in a small plaza development at the corner. Approximately 200,000 square feet—almost 4 1/2 acres—of green-tinted, heat absorbing glass will be used for the entire skin, including the spandrel as well as the permanently sealed windows. Vertical aluminum mullions are spaced five feet apart. Architects for the building are Harrison and Abramovitz and Abbe; Edwards and Hjorth, Structural Engineers; Jaros, Baum and Bolles, Mechanical Engineers; and Ebner Associates, Electrical Engineers. The George A. Fuller Company is general contractor.

Inverted umbrellas

The half-way point in the construction of New York City's Hunter College classroom-administration building and its companion library building was reached this month with the completion of the extensive concrete work involved in the \$3.3 million structures, scheduled for occupancy this fall.

The hyperbolic paraboloid, thin-shell concrete roof is divided into six sections shaped like inverted umbrellas that gently slope twelve feet from the surface to the lowest point. Each 60 by 60-foot bay is supported by a reinforced "roman cross" concrete column. Architects for the project are Marcel Breuer and Associates of New York and The Hague. The Breuer office recently completed the UNESCO building in Paris. Structural Engineers are Parkas and Barron of New York. General contractors for the unusual structure are Leon D. DeMatteis and Sons of Elmont, New York.

Space lattice

The world's largest "space lattice," an open work geodesic dome built by the American Society for Metals on the site of their new \$2.4 million headquarters office building east of Cleveland, Ohio, was completed last Decem-

ber when the final 50-foot in diameter center section was 103 feet into place.

The spider web-like pentagon component rose to the top in 45 minutes once the "hitch and balance" of the lift were perfected. The completed dome, made of aluminum tubing four and six inches in diameter, is a huge honeycomb structure 250 feet in diameter by 103 feet high. In excess of 65,000 pieces went into it. Eleven-foot hexagons comprise the pattern of the dome which in reality is two domes in one with 30 inches separating the two.

R. Buckminster Fuller, designed the dome in conjunction with Architect John Terrence Kelly of Cleveland.

Concrete convention

The American Concrete Institute will hold its annual convention in Los Angeles, February 23-26, 1959. Many technical papers will be presented at the working sessions. A few of the topics to be presented by the attending authorities will be discussions on the design of prestressed concrete lift slabs for deflection control; prestressed concrete shells for grandstands and roofs; laboratory research in products and precast and prestressed folded plate slabs; plastic forms and exposed aggregate types of decorative panels. Sam Hobbs, secretary-treasurer, ACI Southern California Chapter is general chairman of the Los Angeles meeting.

Big BRI year

Opening a year of expanded technical activity, the Building Research Institute launched its program with a conference on noise control in buildings at the Hotel New Yorker in New York City on January 14th and 15th. This opening meeting heralds a year crammed with a variety of activities aimed at putting building research on a new plane for the entire industry and its associated professions of architecture and engineering.

The recent conference was designed to state the problems of noise control. Details available: BRI's Executive Secretary, 2101 Constitution Ave., Washington 25, D. C.



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forecast

THE YEAR PAST: construction activity in 1958

The dollar value of new construction put in place during 1958 totaled \$49 billion, about 2 per cent above the record \$48.1 billion spent in 1957, according to preliminary estimates prepared jointly by the Departments of Labor and Commerce. The private total of \$34 billion matched the all-time high of 1957, and public outlays rose 6 per cent to a new peak of \$15 billion.

Preliminary indications are that the over-all physical volume of new construction put in place during 1958 (expenditures adjusted for price changes) was about the same as in 1957, or slightly below the peak of 1955.

Primarily because of the \$1.1 billion drop in industrial building, 1958 was the first year since 1949 that the private total failed to show an over-the-year increase. Private spending reached new highs in 1958 for office buildings and warehouses, schools, and hospitals, and the rate of decline in store building was less than half that experienced in 1957. Construction of churches and related buildings held near the record level of 1957, as did outlays for privately owned public utilities.

Private residential construction, after declining in 1956 and 1957, rose 5 per cent in 1958 to \$17.9 billion, but was still 4 per cent below the 1955 peak. The value of work done on new dwelling units began to exceed year-earlier levels in June 1958, and the gains widened from 8 per cent in the third quarter to 17 per cent in the fourth quarter. Despite this improvement, the 1958 total dollar volume for new dwelling units (\$13.4 billion) was about \$1.6 billion, or 11 per cent, less than the peak of 1955. Spending last year for additions and alterations to existing residences almost equaled the 1957 record, and the value of work done on new hotels and motels reached a new high.

Expenditures edged up to new peaks also for public schools (\$2.9 billion) and for conservation and development projects (\$1 billion). Administrative and service building outlays expanded, for the sixth consecutive year, to more than half a billion dollars, primarily because of the work done on new post offices and other Federal office buildings. Public hospital and institutional building showed another substantial rise in 1958, after reversing a five-year downtrend in 1957. Public industrial building dropped sharply over the year, however, and military construction continued the decline begun in 1957.

THE YEAR AHEAD: outlook for new construction in 1959

Spending for new construction is expected to rise 7 per cent to a record \$52.3 billion in 1959, thus passing the \$50-billion mark for the first time. About \$48.8 billion of expenditures are in sight for 1958. The anticipated 1959 outlays also reflect a new high in physical volume of work put in place (expenditures adjusted for price changes), exceeding the previous peak in 1955 by 3 per cent.

Public expenditures are expected to provide the major part of the 1959 expansion in new construction—rising by \$2.1 billion to \$17.1 billion. The \$35.2 billion total foreseen for private construction represents a gain of \$1.4 billion over 1958.

Most of the \$3.5 billion increase in construction expenditures for 1959 will be in residential building (public and private) and highways, which together will account for almost four-fifths of the advance over 1958.

The anticipated dollar volume of new construction in 1959 is based on the assumption of a continued rise in the nation's total output of goods and services. Despite increased demands for credit from other sectors of the economy, it is assumed that funds for construction will be generally adequate, but that money for home mortgages probably will become less readily available at the comparatively low downpayments and interest rates prevailing in 1958. The outlook is that approximately 1,200,000 nonfarm dwelling units, private and public, will be started in 1959, compared with about 1,170,000 in 1958. Construction costs are expected to rise moderately. In addition, spending for publicly owned housing will

NEW CONSTRUCTION PUT IN PLACE IN
CONTINENTAL UNITED STATES
1957, 1958, AND OUTLOOK FOR 1959*

PRIVATE CONSTRUCTION

1957	\$33,988	-1% (57/58)
1958	\$33,800	+4% (58/59)
1959	\$35,200	

PUBLIC CONSTRUCTION

1957	\$14,127	+6% (57/58)
1958	\$15,000	+14% (58/59)
1959	\$17,000	

TOTAL NEW CONSTRUCTION

1957	\$48,115	+1% (57/58)
1958	\$48,800	+7% (58/59)
1959	\$52,300	

* COMPARISONS GIVEN IN MILLIONS—JOINT ESTIMATES
OF THE DEPARTMENTS OF LABOR & COMMERCE, WASH., D.C.

exceed the billion-dollar mark for the first time, rising by almost \$300 million to \$1.1 billion. Additions and alterations to housing will probably rise also after a mild downturn this year.

Private construction

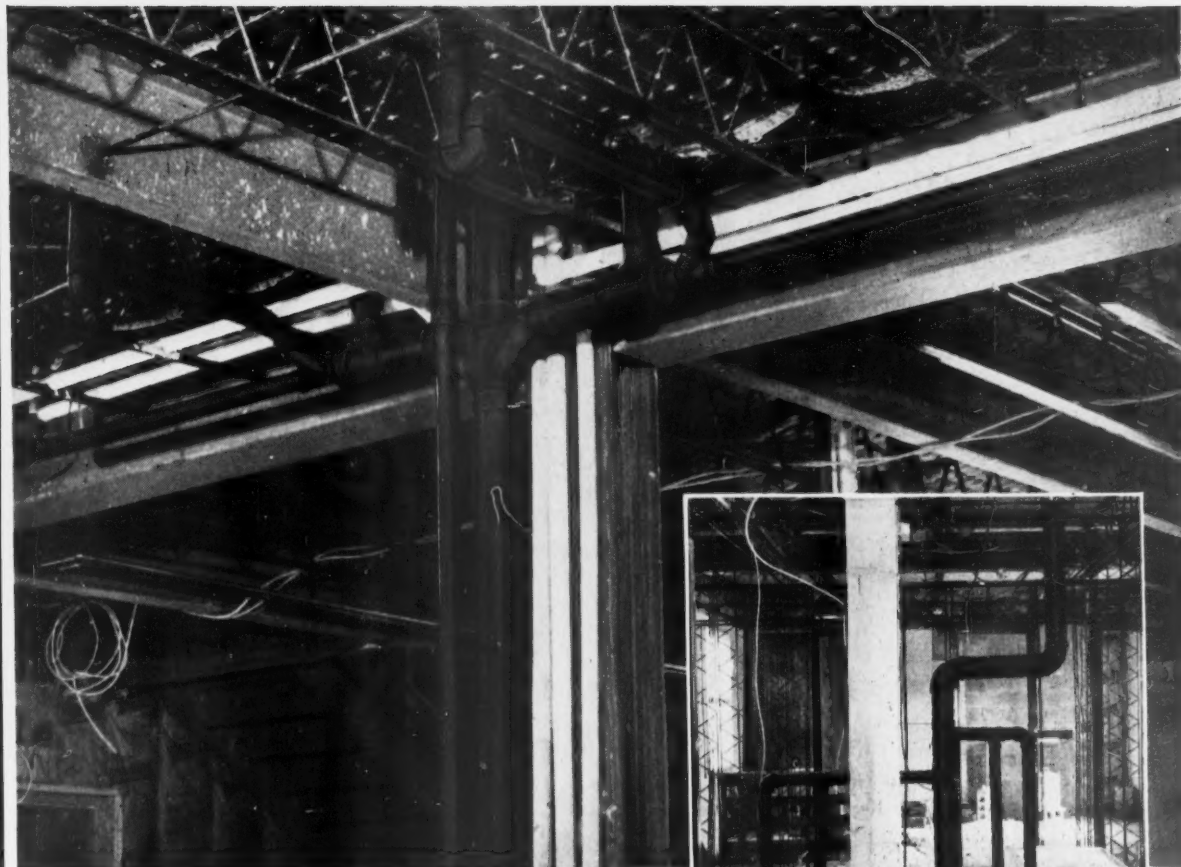
For the second successive year, private non-residential building construction as a whole will decrease, due primarily to a further decline in industrial building. The 3 per cent loss reflects sharply diverse trends among the various types of building.

Aggregate spending for commercial buildings will expand to match the record total of \$3.6 billion achieved in 1956. However, each of the two major categories involved will remain below its individual peak. Thus, office buildings and warehouses which will set a record of almost \$2 billion in 1958, will probably fall back to the \$1.9 billion for 1957, reflecting completion of a large number of major office building projects started in New York City during the past few years. Expenditures for new stores, restaurants, and garages are expected to increase by 10 per cent, to \$1.7 billion, but this would still be 10 per cent below the 1956 high of almost \$2 billion. Expansion in shopping facilities is expected, influenced by improved availability of financing in 1958, as well as the present rapid extension of highways, continued growth of suburban areas, developing urban renewal programs, and high retail sales.

The dollar volume of private educational building will rise about 10 per cent this year to an all-time high of \$600 million. Private hospital and institutional construction will remain virtually at the \$600 million peak in prospect for this year.

Public construction

Well over half the \$2.1 billion advance in public construction outlays in 1959 will be financed by the Federal Government. Anti-recession measures and re-evaluation of defense programs have resulted in acceleration of projects, rising contract awards, and large appropriations for 1958, which will result in sizable increases in the amounts spent on direct Federal and Federal-aid construction in the coming year. All types of public construction are expected to rise, however, bringing the total to a record \$17.1 billion.



Typical waste and soil line layout for two complete bathrooms in the Novitiate Building of Brothers of the Holy Cross. Note compact, space-saving connections to the 4" soil stack. Light weight of copper tube makes overhead work easier, faster. Combination of copper tube and solder-joint fittings makes working in close quarters easy. Right: Trim copper tube vent lines on top floor for back-to-back bathrooms on this floor and floor below—eliminate wide plumbing walls, reduce construction costs, give greater usable floor area.

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installed. All of these advantages add up to substantial savings."

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Model of Chapel and Novitiate Building, Brothers of the Holy Cross, Kinderhook, N. Y. Anaconda Type DWV copper drainage tube and Anaconda cast-brass drainage fittings were used on interior soil, waste, and vent lines. Architect: Toole and Angerame, Albany, N. Y. Plumbing and heating contractor: Farrell Bros., Albany, N. Y.

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A FLOATING BARGE FOUNDATION

An unusual foundation condition and its solution reported by Werner Valeur-Jensen, P.E., of Werner-Jensen & Korst, Consulting Engineers, and Thorne Sherwood, AIA, of Sherwood, Mills & Smith, Architects.

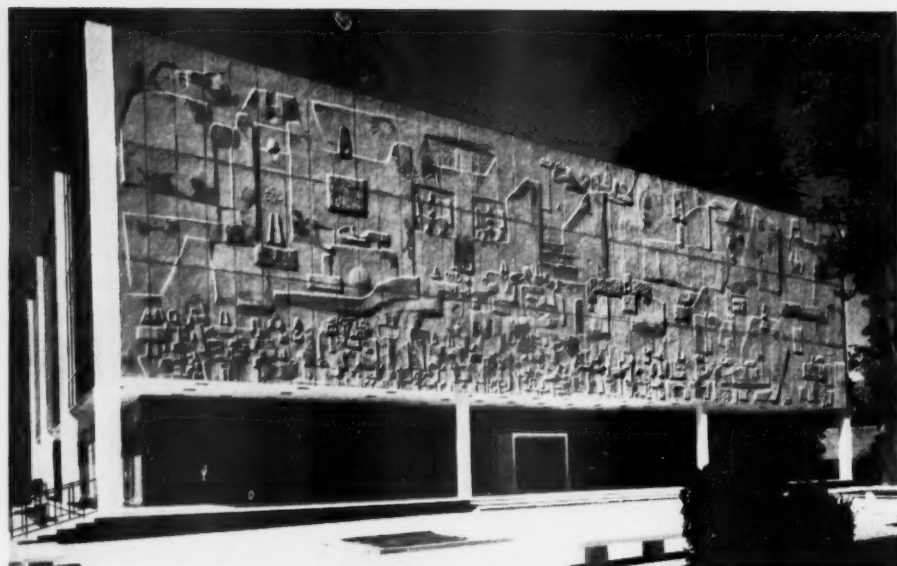


Photo: Robert Stahman

Recently, the Mutual Insurance Company of Hartford opened its new headquarters on Woodland Street in Hartford, Connecticut. An unusual problem lies behind this pleasant event—at least for our architectural firm and for our consulting engineers. Now that the structure has been occupied, we would like to sit back momentarily and share, in retrospect, our experience with you.

The site, which had been selected, proved to be in an area with rare sub-soil conditions. Our preliminary surveys revealed the presence of extremely soft silt. We did not know, at that time, the absolute condition present.

In that early study, we recorded the natural condition of the soil through test borings, using penetration resistance of a split sample spoon under drop hammer blows as an index of soil density and consistency. Recordings were made for each five-foot depth. To a depth of

100 feet, no blows by the hammer were required to drive the sample spoon. It was simply pushed by hand.

One boring showed this condition continuing to a depth of 122 feet with the soil a red and gray silty clay. Water was found at approximately ten feet down. A stratum of this type of soil is normally classified as having no bearing value or of negligible bearing value at best. The project not only had a stratum of such muck and mire which we call "goo," but it came in rivulets and streams into a whole sea of it vast enough to float in.

At the risk of appearing redundant as well as facetious, this condition determined the ultimate character of our foundation. We decided to rest the entire structure on a reinforced concrete barge, floating, as it were. "Muck and mire" may now sound like some vaudeville comedy team, but at the time, it gave us quite a dramatic

and eventful turn of mind.

Before describing in detail how this problem was solved, a word should be said about the project's architectural aims. We, as the architects, desired a full, uninterrupted floor area, free from interior columns. In addition, we wanted to achieve easy commuting between floors.

This led to the development of two alternative preliminary schemes: a rectangular box with service cores at each end; and a square box with a service core in the center.

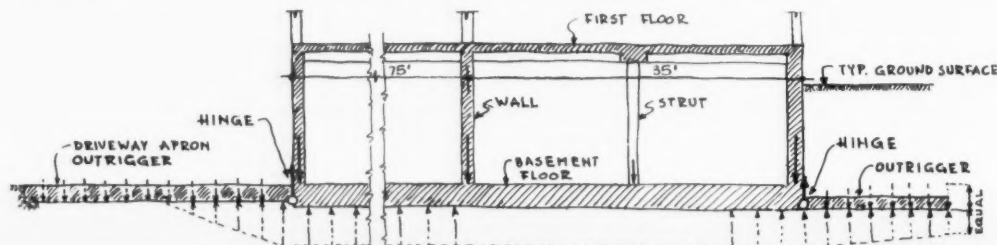
The mechanical engineers, Fred Dubin and Associates, found a savings in the square box scheme. It also offered other advantages, as we shall presently see, in structural elegance. The architects adopted the square box scheme, using north and south glass walls with east and west solid walls above the second floor and office areas 40 feet clear on all sides of the central service

core as the most economical plan.

Structural analysis of the scheme showed very attractive savings in using a floating foundation as against a pile or caisson job sunk to terra firma some 130 feet down. The lightness of the structure became an economic factor, leading to a steel superstructure with 2½ inch lightweight concrete floor over steel deck.

The delicate soil problem—with its excess of "goo" offered a wide variety of possibilities for failure. Its depth in relation to the extent of the structure was sufficient to accommodate a so-called "Swedish Circle," which is a curved plane of failure by rotational slide in the subsoil under eccentric loading. The theoretical possibility existed for a complete *somersault* of the structure. Plain overloading and progressive failure was also a possibility as any disturbance of this subsoil could make it lose its texture and become rather liquid. By

SECTION THRU FIRST FLOOR-BASEMENT BOX GIRDER



any analytical process, it is difficult in such a case, to establish the probable extent of any movement or settlement under uneven loads. In short, a full theoretical analysis is practically impossible.

The consulting engineers' solution was to assimilate the natural state of stability in the following way: the building was designed to float on a boat consisting of a two-way box girder, a "space box" girder with the first floor and basement floor as top and bottom chords, and with exterior basement walls and basement partitions 40 feet on center both ways as web members.

The first floor slab, six inches thick, has a two-way grid of low beams, designed to hold the first floor up or basement floor down, as the situation required, using "limit design" principle to great advantage. The basement slab, with its long spans, designed continuous two-ways is a mat only 20 inches thick.

The engineers determined the elevation of the building by the buoyancy under dead load plus 25 per cent of live load. Because equilibrium might still be disturbed either by a change in temporary vertical loads or by a decrease in

(Continued on page 39)



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school dollars

Facts and figures or frills and fripperies? How much of the total educational dollar goes to new school construction? Where can potential economies be effected?

Dangling like the proverbial sword of Damocles over the architectural and allied engineering professions, school administrators and boards, and the taxpayers, has been the recently vociferous, yet long-standing issue of the cost of new school building construction.

In the past few months, the nation's largest city, New York, has seen front-page headlines charging "monstrous" waste in the planning and design of schools. Articles have appeared in a variety of mass-circulated magazines underscoring these contentions by stating that "palaces" are being built.

Ironically, out of a total new nationwide construction expenditure of \$52.3 billion, projected for 1959, only \$2.9 will probably be spent for new schools.

Our populace annually spends over \$10.5 billion for the consumption of alcohol. Yet, the issue of the cost of schools for our children has become an arena for a variety of emotionally-charged fulminations about "extravagant frills," and "waste" by architects and their client school boards.

The dilemma faced by school authorities and others is how to avoid paying too much or too little for badly needed school housing. How can just the right amount be paid and make the hard-to-get school plant dollars go far and still buy the best value?

Oddly enough, costs of new school buildings have been consistently lower than the costs of other comparable construction in most communities.

The State Departments of Education of two key states, New York and California, have recently issued comprehensive reports based on findings

of their investigations of school costs. Their documentation is based on the trends of the past few years and extend over a wide variety of building types: elementary, secondary and specialized schools. However, in reporting the material, emphasis is placed on California's elementary schools and for New York State, its secondary school costs. The material is of such a universal nature that it is easily applicable to experience in other states.

MAJOR VARIABLES:

To the initiated, any objective discussion of school building construction costs must begin with a review of the variable factors which affect such costs.

The major variables are: economic conditions, planning procedures, geographical location of the project, size of the project, simplicity or complexity of the building, the quality of building materials and construction, the program requirements of the owner, and finally the method of reporting costs.

THE TOTAL EDUCATION DOLLAR:

Out of the total educational dollar, California found that the yearly-per-pupil cost of a typical elementary school plant, constructed to house 600 students and amortized over a 40-year period of use, equals ten per cent of the total year-cost of educating a child. Out of the dollar expenditure per pupil for the total educational program, the *adequate, permanent,*

so one day i sneaked into school because i'm too young and i'm not allowed yet.



medium quality-level school plant costs ten cents.

The California report goes on to state its experience in attempting to effect the lowering of the quality level of school building construction. The relative effect of saving two cents out of the ten cents currently spent on the building is reflected in dollars and cents in *continuing higher maintenance costs.* Lowering of the quality level of buildings also is reflected in the reduced effectiveness of the instructional program as measured by

limited or poorly related space, inadequate equipment and/or poor visual, thermal, or auditory requirements. The State of California's analysis indicates that the two cents saved by reducing the quality-level of the school building places additional financial burdens on the current expense budget through excessive maintenance costs and lowers considerably the value of the seventy cents spent on the instructional program by creating a *poorer teaching-learning environment.*

WHERE ARE POTENTIAL ECONOMIES:

What is "economy" in school housing? The New York State Department of Education investigation, under the direction of Architect Wayne F. Koppes and with the assistance of Dean Harold D. Hauf and the faculty of the School of Architecture of Rensselaer Polytechnic Institute, has just issued an 102 page documented study to answer this question of "economy."

Economy is not to be confused with "cheapness" or is it necessarily "low-cost." The report emphasizes that "maximum value" is the criterion for judgement. It is the naive taxpayer who looks only at the initial building costs in search of educational economy. The amount he will be required to pay annually for the entire educational program should be his concern. The survey indicates that new school buildings in New York State cost approximately 12 cents out of the total educational dollar. Obviously, there are no panaceas in approaching the problem of economies in school construction. The report examined seventeen suggested means of economy relative to the *entire building process.* Some of the ideas were found to offer little or no predictable savings.

SOURCES OF POTENTIAL ECONOMIES:

It appears that the sources of greatest potential economies in rela-

and i loaned a piece of chalk and i drew all over the walls. i drew lassie and i drew captain kangaroo and i drew an elephant eating a lion tamer.



tion to design will result from the following:

1. *Wider use of modular planning, repetitive units, and off-site fabrication.*
2. *Recognition of the importance of maintenance costs and consistent efforts to reduce them.*
3. *Objective research as to the real needs in schools, aimed at reducing arbitrary but unessential requirements for structure and equipment.*

EVALUATED PROCEDURES:

The two most likely procedural methods that could affect potential savings in over-all costs appear to be:

1. *Method chosen for financing.*
2. *Competency of architectural services in facilitating accurate bids and expediting the work.*

STATE LEVEL SERVICES:

Among the services that could be applied or supplied at the state level are:

1. *Objective research, directed at determining justifiable needs, maintenance costs and evaluating materials and methods.*
2. *Coordination for a program of cooperative action among archi-*

so anyhow all of a sudden i hear like a whole bunch of people coming so i hid.



ects, engineers, builders, labor and financial groups directed specifically at this problem.

3. *Research in cooperation with competent professional authorities, of the feasibility and merits of a standard format for school specifications.*
4. *A more intensive program of advisory services for local school boards on all matters affecting long-term school costs.*
5. *Review of fire insurance rates.*

DETAILED ANALYSES:

The Empire State report reviews in detail the problems of building design, including planning, materials and equipment; regulations and requirements which govern design; and procedures followed in the financing and building programs. A/E NEWS has condensed, as succinctly as possible,

their findings and conclusions.

BUILDING PLANNING:

The single-story vs. the multiple-story building; the principal advantages are summarized for each:

For the single story:

1. Elimination of expensive and hazardous stairways.
2. Layout flexibility, permitting space requirements and site conditions to be met with minimum of waste.
3. Lighter structural design loads, resulting in reduced foundation requirements, a consideration of particular importance in areas of poor sub-soil conditions.
4. Possibility of using cheaper non-fireproof construction.
5. Reduced cost of maintenance for window areas and exterior walls eliminating need for scaffolding and extra risk insurance for workmen.

For the multi-story:

1. Smaller square footage of ground coverage resulting in reduced lineal footage of foundations; a consideration if site is rolling or "difficult."
2. Reduced roof area effecting heat loss and maintenance costs.
3. Lower plumbing costs, with compact toilet layouts.
4. Shorter runs for piping, duct work and conduit.
5. Reduced heating costs due to lower over-all heating loss.

These factors must be weighed and

so this whole bunch of people comes and they see what I drew on the walls—like Lassie and captain kangaroo and an elephant eating a lion tamer.



compared in each case. Their relative importance varies with each situation. The use of multi-story buildings should be considered as probable economy when program calls for 30 or more classrooms.

CAMPUS VS. COMPACT PLAN:

The campus plan philosophy, also known as the extended unit plan, originated in California, must be compared with older and more compact plans.

For the campus plan:

1. Usually very significant savings

in cost of site development and grading, except in cases of perfectly flat, open locations.

2. Reduction of enclosed corridor space through use of open, covered walks.
3. Provision for economical future expansion without disrupting use of existing buildings.
4. Savings on fire insurance rates.
5. Feasibility of using small individual heating units.

For the compact plan:

1. Reduced mechanical costs due to centralized equipment, reduction of runs, and less duplication of equipment.
2. Much less exterior wall perimeter.
3. Lower maintenance costs.

Neither the campus plan nor the compact plan offer consistent advantages of comparative economy. Each project must be considered individually in light of the specific problems involved.

USE OF REPETITIVE UNITS:

The report states that wider use of repetitive units (modular planning) is hampered because of lack of experience and insufficient knowledge of the concept on the part of architects and engineers. The full potential benefits of modular planning must await the conversion of more manufactured building products to the 4-inch coordinated dimensional system. The use of repetitive bay dimensions, beam lengths, column spacings, window locations, mechanical and electrical service units, and similar elements not only simplifies the material fabricating problem but also facilitates the construction operation at the site. Ultimately, as a system, it offers the promise of more economy than any other currently known technological concept.

SPACE MODULE CONCEPT:

The basic space module concept originated in California by Architect Ernest J. Kump. This principal embraces more than the application of modular components, although their use is essential. The basic space module is not a building unit, but it is a "block of space" which is used repeatedly throughout the plant, thus multiplying the total of repetitive elements. All environmental factors are built into the structural shell. Since there are no loadbearing walls or partitions, the interior space is left free

for division in any way desired. The concept combines flexibility of educational space with a maximum use of repetitive components. The concept permits wide variation in materials, framing, roof shapes, and open or enclosed corridor schemes.

"LIFT-SLAB" METHOD:

If the degree of fire-resistance required in a building calls for reinforced concrete floors and roofs, the "lift-slab" method is often competitive with poured-in-place construction.

The method offers its greatest advantage when the structural floors can be designed on the flat-plate principle, with overhangs to give a more even bending moment distribution in the slabs. For multi-story schools designed with flat-plate concrete floors and roof, some degree of economy may be realized by the client (school board) if alternate bids are requested for both poured-in-place and "lift-slab" construction.

PREFABRICATED SCHOOLS:

The term "pre-fabricated" is used

and they all get very red and scream—HA! ANOTHER FRILL! and they wanted to know how much the frill cost and everything.



here with two connotations:

1. To denote school construction systems that are built to a design fixed largely by the manufacturer.
2. To denote a system of components which may be assembled in a variety of ways, permitting the architect to give full consideration to specific functional requirements and site conditions.

Some systems intended to possess the characteristics of the second category can, in general, be built for less money than comparable conventionally built schools, provided it is constructed substantially unchanged from the basic design offered by the manufacturer. When changes have to be made to accommodate functional layout, site conditions, or special governmental regulations, the economic advantage is largely lost.

The second category includes some of the systems used extensively in Great Britain. The study has not dis-

covered any system marketed in U.S. comparable to the British one. Conclusions are that at the present time there are no prefabricated school systems that offer clear-cut economic advantages and still retain a substantial degree of flexibility in design.

PROPRIETARY DESIGNS:

A representative proprietary system of the patented building plan field was reviewed. From comparative cost studies, comparable architect-designed schools have been built at less cost. There seem to be no consistent savings inherent in this system studied.

EXTERIOR WALLS:

Architects interviewed seemed to feel that metal curtain walls and conventional masonry walls are fast approaching a stand-off in initial cost. Certain contributing factors are:

1. Increasing use of metal wall systems are familiarizing both architects and builders with their proper and more efficient application.
2. Increased production and competition among manufacturers tends to improve the quality of the product and lower its costs.
3. Increasing cost of labor contributes to rising cost of "hand-made" masonry constructions.

The conclusions given are that by a careful choice of materials the initial costs of exterior walls may be lowered by as much as 20 per cent, but in doing this, maintenance may be increased.

so they started going through a bunch of books and somebody says—THIS FRILL ISN'T EVEN LISTED! and somebody else says—GREAT SCOTT! A PAYOFF!



THERMAL INSULATION:

The value of adequate thermal insulation as an economy measure often is neglected. It applies only to operational costs. The examination of a number of typical wall and roof constructions disclosed that by use of proper insulation the total long-term costs over a period of 30 years could be reduced from 11 per cent to 22 per cent. Heating costs alone can be reduced, in some cases, by as much as 75 per cent. The more adequate thermal insulation of walls and roofs will

not usually lower initial costs, but may result in savings as much as 6 per cent of the total annual operating and maintenance costs.

MATERIALS SELECTED AND MAINTENANCE:

It costs the taxpayer almost as much each year to run the school buildings as it does to acquire them. In fact, high maintenance costs are sometimes knowingly accepted, to "worry about later," if the contract price can be reduced in the process. It will, no doubt, require a long-term educational effort to develop general recognition of the fallacy of this philosophy, but it is encouraging to note that increasing attention is being paid to upkeep costs and their over-all significance. A 10 per cent reduction in these costs is almost as important a saving to the tax payer as a 10 per cent reduction in the cost of the building, because maintenance costs endure for the life of the building, increasing, in fact, with the age of the building, while payments on the initial costs end after 30 years or so.

With careful attention to the selection of materials and the efficient use of labor, maintenance costs could be reduced 10 per cent, a saving almost

so anyhow in all the excitement some guy rubs against the elephant eating the lion tamer and it comes off.



as important as the same proportionate reduction in the cost of the building.

MECHANICAL EQUIPMENT:

There is a tendency to over-design heating and ventilating systems in schools. Some authorities consulted thought that the reason for this was lack of information (at the time the basic design was established) as to final treatment of walls, amount of glass area, door area, etc.

This points to the fact that closer cooperation may often be needed between the architect and the engineer, during early design stages.

The study concludes that in many cases the mechanical systems of schools are unnecessarily expensive; a more realistic consideration of needs may offer valid economies. These matters should be carefully and thoroughly in-

vestigated. Potential savings of as high as 15 per cent of the heating and ventilating costs (or 1 per cent of total building costs) are indicated.

CONTROL EQUIPMENT:

Many architects feel that temperature controls in school buildings are unduly elaborate. Investigations show that the expense involved ranges from 7 per cent to 20 per cent of the cost of the entire heating and ventilating system. No optimum proportion has been established, but the indications are that an effective and satisfactory control system should probably cost no more than 12 per cent of the total cost of the system.

Much investigation remains to be done in the area of proper utilization of temperature control devices. It would appear that possible economies of 5 per cent of heating and ventilating costs (about 1/3 of 1 per cent of total building expenditures) might be realized in this area.

REGULATIONS AND INSURANCE:

State imposed regulations and fire insurance rates contribute cost factors that, for the most part, are fixed and related to choice (or may limit choice) at the local level.

Accepting the current costs of fire insurance as valid and inescapable, there are several means of saving costs which should not be overlooked:

1. The architect should always check preliminary school plans with the Fire Insurance Rating Organization, to see that the tentative building design permits the most favorable rates possible.
2. School authorities should see that all unnecessary fire hazards are

and boy did everybody get red. FRAUD! they screamed. CHEAP MATERIALS! they screamed. and they all started rubbing at the wall.



eliminated from existing properties, to keep rates at a minimum.

3. The school board should take pains to see that only necessary insurance is carried on the most economical plan.

If serious attention is given to the present insurance rate structures, a general reduction of one-third would reduce the over-all annual building provision costs by about .08 per cent.

PROGRAM PROCEDURES: FINANCING

The extent of economies possible through careful and expert attention to the financing program may often be overlooked. This oversight is due to a tendency to magnify the importance of the contract price of the building, failing to consider its over-all cost. There is too much emphasis on the size of the bond issue, and too little on the annual tax bill. Few taxpayers seem to realize that, on the average, about one-third of the debt service cost is interest charges. Any reduction possible in these charges, therefore, is a significant over-all economy.

Substantial savings can be realized, also, by planning payments for early reduction of principal, rather than postponing the large payments until later. The difference between expensive and economical financing programs can easily amount to 15 per cent of the total building project cost. In the search for economy, financing costs are highly significant.

so off came lassie and captain kangaroo and everything. WHAT A SCANDAL everybody says and they walk out whistling.



PLANNING TIME:

Adequate time is essential for the designing processes for several reasons:

1. The architect needs sufficient time to review the educational specifications and to consult with interested school personnel, so that the basic needs of the school can be met without waste of space or facilities.
2. Complete and accurate plans and specifications are necessary for close bidding. "Loose" design documents lead the contractor to include high contingency items in his bid as a matter of self-protection. The mechanics of producing complete documents and adequately checking them is a complex procedure. If the architect is not permitted adequate time, cost penalties likely follow.
3. The architect must have ample time to coordinate all the structural and mechanical engineering elements of the job with the architectural. Close cooperation with the engineers results in a more complete and unified job. Integration of piping and duct-work in

the design offers economies.

4. Sufficient time for planning should result in more economies through more careful selection of materials by the architect. Given time, he can study best the possible use of materials, investigate new materials and their potentials, and compare both initial and long-range costs to arrive at best choices. This phase of work is time-consuming.

Cost savings, as reflected by lower bids, might be realized by permitting adequate time for the architect's preparation of plans and specifications. Savings could be up to 5 per cent.

CHOICE OF BIDDING TIME:

The most advantageous time for taking bids depends on a number of variables. The location of the projected school, competing projects, seasonal factors, and general economic conditions all have their effects on costs.

Lower bids are often obtained if the job is bid in the winter, when builders are looking for spring and summer work. Timing of bid requests may be responsible for greater savings than any other economy measure. The study stresses that its importance should always be recognized.

BUILDING TRADES:

The report states that the cooperation of the building trades is a prime essential to building cost economies. There is evidence of such cooperative effort in some quarters, but serious lack of it in others.

Chief criticisms currently are directed at the absurdly high costs of supplying temporary heat under union regulations, adding tens of thousands of dollars unnecessarily to costs. This could account for as much as 2 per cent or 3 per cent of initial costs.

so when i was all alone i loaned another piece of chalk and drew cowboys shooting indians.



Copyright by Jules Feiffer. Reprinted from "The Village Voice", New York City, Dec. 3, 1958. A collection of cartoons by Jules Feiffer appears in the book, "Sick, Sick, Sick," published by McGraw-Hill Book Co., Inc., New York City, 1958.

AN IMMODEST PROPOSAL

H. R. Hays in his "From Ape to Angel" reports that in Papua, the British civil authorities frowned on the local natives' use of a human victim in a sacrificial rite. An anthropologist appointed by his majesty's government managed to substitute the body of a pig for a man and a football to replace a spear in discharging hostility.

What we dare suggest is that architects of schools are being roasted in a latter-day version, in print, of the aboriginal sacrificial rite.

A recent rash of self-appointed architectural "experts" or "critics" have carped and harped about "palatial" schools. With some justification, they have touched upon a universal problem—tax support for new school construction. These fiscal matters merit our sympathy because the cold-pinned breath of April 15th is nigh.

But in reading these detractors, one gains the impression that countless communities are on the brink of educational disaster. Architects are being charged with "promoting" extravagance, as a conscious professional aim. These attacks, obviously unfair and equally lacking in candor, would imply that architects are devoid of professionalism or are incompetent in their profession. Conveniently overlooked have been the rapidly up-spiraling population increase and the other realistic criteria in the direction of the national economy. Beyond the outrageous distortion of simple truths by the parvenu critics, one could point out with a mote of irony that \$10.5 billion are spent annually in the consumption of alcohol whereas annual school building expenditures amount to \$2.5 billion. Literally this is a wee-island of culture floating in an ocean of booze. Pointing out this sad artifact may make us appear as a bit of a spoil-sport. We wish these problems a swift trip in a leaky barrel over Niagara Falls; but since the recently distressed air is still filled with arrows, slings and spears clouding this issue, we felt it high time for an immodest proposal.

We propose that a detached, eminent anthropologist like Margaret Meade could be persuaded to drop researching dance and trance in Bali long enough to give a cursory glance at some of our home-grown architectural dance and trance.

She may find that well meaning people everywhere, who are rightfully concerned about rising taxes, have been influenced to view many of our newly and handsomely designed schools as the ultimate in building extravagance and their architect-authors as sybaritic voluptuaries.

Another observation could be made that the more procrustean of us are hard to convince—that children are people—entitled to a beautiful start in life, where the impressions of an appealing and comfortable learning environment, in formative years, are most critical and permanent. A climate of mediocrity is not the most

conducive to an intellectual and aesthetic awakening to life.

The young, the most innocent of us all, are the ones upon whom we will depend tomorrow to conquer infinite cosmic space and to master the wonders of our universe.

Miss Meade may find that this is meaningless to the "it was good enough for grandpa and me" mentality—but, if she examines closer, she'll note that the high-button shoes set rarely hesitates to pick a big-finned auto in preference to a good, old-fashioned, economical horse and buggy.

Again, our anthropologist could point out that in an ever-expanding democracy like ours, more and more people are beginning to participate in the responsible work of school boards everywhere. To many of these good people, the architects represent an isolated "in-grouping," complete with ritualistic cant and mad-geniuses—out to snare the unwary and the guileless.

Busy lay-people, in considering new school construction, simply do not have the readiness level of technical and planning appreciation in programming school buildings. They bring "practical" (a much-abused word) measures to deliberations. The subsequently-built schools are the expression of the resources in experience and people involved.

Difficulties occur between specialists and non-specialists when the two bob-up-and-down in a sea of misunderstanding. Many an architect probably has had the bitter experience of a situation wherein everyone was an expert on architecture—except the architect.

In presenting a school plan to a lay-audience, the architect may symbolize the "cloud 39" specialist. Specialists often tend to ignore the wide distribution of levels of intelligence and experience inherent in most broad community groups. Actually what occurs at such meetings is a *learning* situation. It can either become a negative or a positive learning. That brilliant parti or one's aesthetic criteria could become meaningful if the presentation occurs on the basis of a *shared* level of experience. Architectural images should be set at the motivational level of the audience. Therefore, the tendency is to cling to the tried and true out of a desire for safety. Often a worthwhile and outstanding architectural effort is figuratively washed away in the wake of this lack of basic communication. New understandings for old—and they might throw away those spears.

Better still, Margaret Meade could gather up those spears and place them on display in a penny-museum, where they belonged in the first place, as a reminder that we really are living in the latter part of the twentieth-century.

JJC
ACKNOWLEDGEMENT: Our thanks for the many kind and gracious letters in response to our first issue.

Editor:

... On page 6 (Nov/Dec, 1958 issue), you describe Mies Van der Rohe's Newark skyscrapers, and list Frank J. Kornacker as structural engineer.

Please be advised that the correct listing should have been Frank J. Kornacker and Robert Rosenwasser, Associated Structural Engineers.

I would appreciate some acknowledgement of the above in your next issue.

Very truly yours,
Robert Rosenwasser
Civil Engineer
New York 18, N. Y.

You have it! ... Ed.

Editor:

The news section of your first issue reported an urban renewal project in Newark with three 22 story apartment towers designed by Mies Van der Rohe and associated architects. The structural engineer, Frank J. Kornacker, is quoted as saying that these buildings will be the tallest flat-slab reinforced concrete structures on the eastern seaboard. I believe Mr. Kornacker is mistaken.

The office building known as 110 William Street, now nearing completion in New York City, is, in fact, the tallest flat-slab reinforced concrete structure in the United States. It tops out at 416 feet 11 1/2 inches.

An article in the June 27, 1957 issue of *Engineering News-Record* claimed the U.S.A. height record for this type of construction for a Chicago apartment building. But although the apartment house was to be 40 stories high, it would be only 365 feet tall. The office building far outreaches it with a mere 31 stories and penthouse.

Part of the reason for this unusual contrast is to be found in a unique aspect of 110 William Street. The finished building will incorporate an existing twenty story structure which it envelopes. This necessitated story heights of more than twelve feet to match those of the World War I vintage structure. (The existing portion is being stripped of its masonry walls and enclosed with aluminum and glass curtain walls to match the new. The resultant massing is far more pleasing than the usual uniformly monotonous setbacks dictated by zoning.)

110 William Street was designed by Sylvan Bien and Robert Bien, Architects, Charles F. Mayer, C. E., the Structural Engineer, and Sears and Kopf, Mechanical and Electrical Engineers.

Very truly yours,
Harold J. Levy
Architect
Brooklyn, N. Y.

Editor:

... The role of the Consulting Engineer in inter-professional practice has too long been thought to be subjugated to the Architect as evidenced in the first paragraph of the article headed "Interplay" (Nov/Dec, 1958 issue) where the "team" is defined as, "the Architect and his Consulting Engineer," and again in the eleventh paragraph, "the Architect and his design team."

We, as Consulting Engineers in inter-professional practice, firmly believe that in order to be on the "Team", the Consultant must be present at all conferences from the project's inception. We can be of vast help in the planning stages of the project in determining the most economical type of structure, the type and location of mechanical equipment, chases required, etc., before the Architect even starts his preliminary sketches. This can be accomplished only if we are considered full members of the team. . .

Yours very truly,
Wm. E. Short
Consulting Engineer
Tulsa, Okla.

Editor:

... I was thinking how beneficial your new magazine might prove to our 580 members . . . when I was suddenly frozen in place. What stopped me was the realization that prestressed concrete or the PRESTRESSED CONCRETE INSTITUTE was not mentioned anywhere in your grand parade of the architectural and engineering societies . . . Surely, that was an innocent omission by you . . . I am sure your future issues will not forget us.

Cordially yours,
Martin P. Korn
Executive Secretary
Prestressed Concrete Institute
Boca Raton, Fla.

No we won't. See page 38. Ed.

Editor:

... I personally have felt that there was a definite need for a periodical such as this catering principally to the problems of the private practicing architectural and engineering professions believing that these two professions so closely related are on a par with other practicing professions such as medical and legal and deserve equal consideration by all persons and groups . . . I am sure that there are benefits to be gotten out of mutual cooperation between architects and consulting engineers and that a continuation and expansion of the relations of these two groups and their work will produce results which will accumulate for the good of all allied professions. There are elements of encroachment on the free and full

professional procedure of architects and consulting engineers which tend to discount the importance of skill from the aspects of price.

Very truly yours,
Floyd H. Valentine, Chairman
Public Relations Committee
Cleveland Consulting Engineers Assn
Cleveland, Ohio

Editor:

I would draw to your attention the fact that in the section labeled "Survey" in your first issue, November-December 1958, under the heading Professional Societies, you omitted the Consulting Engineers Council.

The Council is the largest federation of consulting engineers associations in this country and represents over 1200 independent professional consulting engineer firms, many of whom work with architects.

May I recommend that you obtain full information on the Council . . . and accordingly correct this omission in your next issue.

Very truly yours,
John K. M. Pryke
Past President
Consulting Engineers Council
New York, N. Y.

That we did. See page 38. Ed.

Editor:

... Referring to the item on page 13 ("Survey"), I believe you will want to record in your records that Mr. Robert J. Painter is Executive Secretary of the American Society for Testing Materials and his name should have appeared instead of mine with that of Professor K. B. Woods, our President.

Sincerely yours,
Fred F. Van Atta
Assistant Secretary, ASTM
Philadelphia, Pa.

Editor:

... I read with interest the article, "Interplay", and the letters by Messrs. Shaw, Alexanders, and Reid. All of these were on the subject of collaboration between the Architect and the Engineers with whom he consults. The term collaboration is in all probability too strong to convey the true relationship between the Architect and the Engineer, implying a common responsibility for the design and style of the structure. This is first and foremost the responsibility of the Architect who must make the final decision as to type and style. The Engineer has the responsibility of being a specialist in his own field, offering advice, engineering design, and being as Mr. Reid says a "professional technical advisor" if this is the only service that the architect

requires. I personally feel that the Engineer has much more to offer than merely the sizing of members and the detailing of connections . . . The fallacy I find, as a Consulting Structural Engineer, with this type of thinking is that the Architect limits himself to a small number of structural systems, generally ones that have been in use for many years and are simple enough to be picked from a handbook. These systems, while adequate if competently designed, in many cases do not utilize the materials to their best advantage and frequently deprive the Architect of complete freedom in his overall conception of the project.

The Engineer can offer the most service . . . if he is called in to consult as soon as the Architect starts his first basic sketches. . . . The discussion should cover the types of construction, materials and the approximate cost of various systems . . . Architects in small or isolated communities can now receive complete and competent engineering services as most engineering firms are interested in their work. Strategically planned conferences and inspections along with telephone and mail communications make the distant work feasible.

Architects should expect and should require creative engineering from their consultants, but at the same time should provide them an opportunity to offer such service. It is hard to create when nothing is left to do but locate columns and size beams and when any changes means revisions to the Architect's working drawings.

Yours very truly,
John V. Sutton, P.E.
Consulting Engineer
Greensboro, N. C.

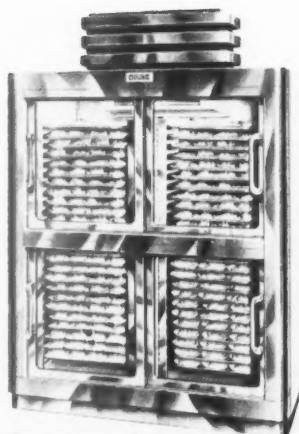
Editor:

... I am a firm believer in close collaboration between architects and structural engineers and evidence of this is found in the inclusion of Dr. Tarics, licensed Structural Engineer, as a principal in a firm where architects and engineers are both represented in the partnership. Dr. Tarics is involved in the design work at an early stage and he has been able to make significant and valuable contributions to the design. We attempt in the design produced by our office to regard the engineer not as a consultant who frames a building according to the dictates of the architects, but who jointly with the architects contributes to and is responsible for the design of the building. It is my strong belief that only through such collaboration can come the best in architecture and engineering . . .

Sincerely yours,
John Lyon Reid, FAIA
San Francisco, California

products, equipment, materials

A/E NEWS offers editorial coverage of manufacturers' recent developments. Inquiry cards for further information face pages 8 and 32.



Refrigerator

MFR'S DESCRIPTION: Koch Refrigerators introduces its new series "MY" refrigerator with sliding glass doors.

USES: institutional, restaurant or hotel kitchens.

SPECS/FEATURES: maximum accessibility and reduction of required aisle space. Not merely variation of standard model; instead designed as compatible unit to be integrated with other "Series M" cabinets. Features one-piece stainless steel sliding doors, glazed with sealed, twin glass assemblies. Solid sliding doors available. Vertical fluorescent lighting provided between each pair of doors. Models available in any combination of stainless steel and white or colored porcelain in either front opening or pass-through door arrangement. Refrigerator remote or self-contained. Manufactured in two, three, or four section widths which have net capacities of 45.5, 70.0 and 92.6 cu ft respectively.

AIA file no. 30-F-6

MFR: KOCH REFRIGERATORS, INC.

Circle 120 for further information



Pedestal teacher's desk

MFR'S DESCRIPTION: a pedestal teacher's desk, in keeping with contemporary design has been introduced featuring "X" frame legs to provide strength without cumbersome, "institutional"-looking understructure.

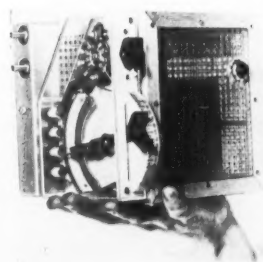
USES: school equipment.

SPECS/FEATURES: laminated plastic top has "hammertone" pattern. Unit available with either right or left pedestal (or both) can be equipped with up to three drawers per pedestal, each with "pilfer-proof" lock. File drawer operates on nylon rollers with full extension arms, which according to the mfr will support up to 200 lbs at full extension, yet move easily at "finger-tip" pressure. Desk available in three sizes: 30" x 48", 30" x 16" and 36" x 72".

AIA file no. 35-B

MFR: THE BRUNSWICK-BALKE-COLLENDER CO.

Circle 121 for further information



Miniature dimmer

MFR'S DESCRIPTION: Kliegl Bros. Lighting announces its invention of a new method of dimming control, called the "S.C.R. Dimmer" as the first commercial application of the newly developed silicon controlled rectifier into a miniature unit.

USES: dimming control in residences, offices, theaters, restaurants, etc.

SPECS/FEATURES: miniature in size; a 4,000 watt dimmer occupies only 1/4 cu ft. Lightweight: approx. one lb of weight per 1,000 watts of control. Silent operation enables location of unit anywhere—need not be located in remote locations. No TV transmission interference. Instantaneous response to potentiometer movement. Efficient; 50 watt loss/4,000 watts. Requires no power step-up; operates on standard 120 v. ac current. Controls infinite loading ranges equally. No maintenance; no adjustments; potentiometer is only moving part. Complete flexibility: mastered, preset or used remotely. Data available.

AIA file no. 31-F-25

MFR: KIEGL BROS. LIGHTING

Circle 122 for further information



Banking window for cars

MFR'S DESCRIPTION: a completely redesigned (by Henry Dreyfuss, Inc.) "drive-in" banking window is offered by Mosler Safe Co.

USES: banking institutions.

SPECS/FEATURES: driver approach, diversity of vehicular sill heights, and banking operation were restudied in this new window. Problems were resolved by eliminating the "bay-type" or overhanging window. Window no longer cantilevers from wall or overhangs the curb, but continues to ground, "apron" style. Construction acts as a better guide to the driver in bringing his car alongside window. Testing of new model established 38" as most optimum drawer height for all vehicles. Drawer moves forward

products, equipment, materials

and back at the flick of a switch. Can be stopped at any point. Manual operation is also provided. Problems of leg-room, functional drawer spaces, window insulation, visibility, etc. have all been studied for new window. Depth of window can be varied for wall thicknesses. Complete specifications available.

AIA file no. 35-S

MFR: THE MOSLER SAFE CO.

Circle 123 for further information

Adjustable stairway

MFR'S DESCRIPTION: an all steel, completely factory assembled stairway which adjusts to whatever height required.

USES: planning needs requiring access stair.

SPECS/FEATURES: adaptable to steel, wood frame or concrete construction. Comes completely assembled for immediate installation. Designed and tested for loading of 100 lb/sf on fully loaded 8' rise with 12 treads. Adaptable where fire-retardant and termite-proof construction is required. Screw type adjustable risers adjust stair treads to level. No special skills or tools are required for installation. Individual riser heights can be varied 6 $\frac{3}{4}$ " to 8 $\frac{1}{2}$ ". Constructed with steel angle stringers reinforced with welded diagonal web members. One-piece, non-slip diamond treads made of 11 gauge steel. Includes 1 $\frac{1}{2}$ " hosing and riser.

AIA file no. 14-D

MFR: NEW JERSEY STEEL JOIST CORP.

Circle 124 for further information

Pivot door enclosure

MFR'S DESCRIPTION: "Pivot-Dor" is announced as new development in sliding tub enclosures.

USES: residential tub accessory.

SPECS/FEATURES: in addition to conventional sliding action, both doors pivot open on the tracks, providing accessibility to the tub. Cleaning of doors from

outside of tub possible. Track construction incorporates stainless steel race bearings in combination with nylon tires permitting non-clogging, and quiet, leak-proof action. Enclosure finish: chrome-plated brass or extruded aluminum frame. Sizes available to fit all tubs; custom sizes on specification. Clear safety glass in some models; choice of clear or obscure glass in others.

AIA file no. 29-H-3

MFR: KEYSTONE SHOWER DOOR CO.

Circle 125 for further information

Built-in water cooler

MFR'S DESCRIPTION: The Ebco Mfg. Co. announces the introduction of a water cooling unit called the Kelvinator "In-A-Wall."

USES: residential, institutional, and commercial planning.

SPECS/FEATURES: electrical unit may be remotely applied or installed in or behind a wall. May be adapted to basement overhead joists in residences. Compactness and efficiency stressed. Drain and adjustable thermostat located in front for ease of access. Grill for wall installation available either in stainless steel or with a prime coat ready for painting. Available in two sizes: Model IW-5 rated at 5 gals per hour, or Model IW-10 rated at 10 gals. Both units carry mfr's five-year warranty.

AIA file no. 29-D-42

MFR: THE EBCO MFG. CO.

Circle 126 for further information

Automatic entrance

MFR'S DESCRIPTION: Kawneer Co. announces a series of "firsts" for its automatic entrance package in which every component is engineered to fit with all other parts.

USES: commercial and institution.

SPECS/FEATURES: completely electrical unit, entire mechanism contained in a 4 $\frac{1}{2}$ " transom bar,

eliminating bulky combination of power and control units and a compressor. Installed in same way as standard manually-operated door, with only additional requirement being socket for 110 v. ac current. Maintenance confined to one trade. Factory set. Electrical operating mechanism can be removed and replaced with spare in seven minutes states Kawneer. Electric relays return door to correct position—compensates for wind pressure that may tend to blow door open.

AIA file no. 16-D

MFR: THE KAWNEER CO.

Circle 127 for further information

Termite barrier

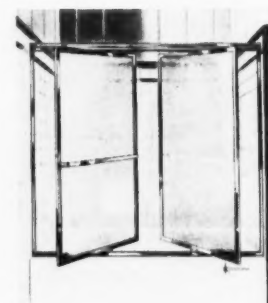
MFR'S DESCRIPTION: Bird "Termibar" is termite resistant vapor barrier that reportedly stops and poisons termites, seals out moisture and kills fire ants, carpenter ants and other ugly insects.

USES: vapor barrier and termite killer.

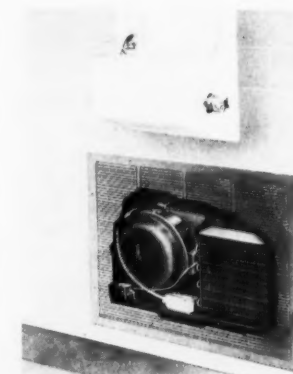
SPECS/FEATURES: architects are familiar with requirements for vapor barriers in construction of foundations for new homes and other buildings. Bird Co. states for slight additional cost, "Termibar" can provide much needed combination of a vapor barrier with an effective insecticide. May be used in these areas: beneath slab foundations with adjoining brick veneer walls; in crawl spaces; beneath full cellar and sill construction; around slab foundations with perimeter insulation; for protection of a home containing slab foundation with built-in heat duct and brick veneer walls. Vapor barrier packaged in five-square rolls containing 550 sq. ft. Each roll is 6' wide, 91 $\frac{3}{4}$ " long, weighing approx 93 lbs. Laid in strips, side by side with 6" overlap. No special equipment required for application. "Termibar Caulk," an asphalt caulking compound containing dieldrin is designed for use with treated



124



125



126



127

vapor barrier to be applied in open space and around pipes, structural members and other openings. Comes in cartridge used with standard caulking gun.

AIA file no. 37-E-1

MFR: BIRD & SON, INC.

Circle 126 for further information

Deleafing additive

MFR'S DESCRIPTION: Alcoa announces the development of a new additive, "Stabilizer #5" that eliminates the deleafing of aluminum pigments in alkyd and high-acid varnish vehicles.

USES: industrial and trade use of paint.

SPECS/FEATURES: Alcoa states that its new additive, a clear, amber liquid makes possible ready-mixed formulations with acid values up to 28. A wider range of high-acid number aluminum paints will become available. Mfr claims marked increase in durability of paint and doubling of corrosion resistance against salt water and salt water spray. Charts describe correct amounts of usage.

AIA file no. 25-A-4

MFR: ALUMINUM COMPANY OF AMERICA

Circle 129 for further information

Concrete curing blankets

MFR'S DESCRIPTION: Fiberglass "Concrete Curing Blanket" is designed to protect curing concrete from inclement weather and freezing temperatures.

USES: poured concrete installations.

SPECS / FEATURES: fine-fibered, flexible, resilient, felt-like blanket of fibrous glass bonded with a thermo-setting resin, completely enclosed in an 8 mil black polyethylene film. When temperatures are near freezing, chemical action of curing concrete practically ceases and protection is needed to retain moisture necessary for further hardening, to maintain temperatures that will control hydration and to help prevent freezing. Product is lightweight, re-usable and can be moved from "pour" to "pour". Any rips or tears that may occur are repaired with pressure-sensi-

tive polyethylene tape. Available in two thicknesses: standard 1" and heavy duty 2", in a width of 72" and a length of 50'.

AIA file no. 4-C-2

MFG: OWENS-CORNING FIBERGLAS CORP.

Circle 130 for further information

Bi-fold doors

MFR'S DESCRIPTION: latest door product of Simpson Logging Co. requires only a screwdriver for installation.

USES: residential and commercial.

SPECS / FEATURES: bi-fold doors have spring loaded, self-adjusting pivot brackets. Floor attachments not required because of "sure-sheet" aligner. Sizes: two-door units for 2', 2'-6" and 3' widths; four-door units for 4', 5' and 6' widths. Louver doors available in Douglas fir, and seven ply flush doors in lauan, sen and birch woods. Shipped pre-assembled in protective carton.

AIA file no. 16-M

MFR: SIMPSON LOGGING CO.

Circle 131 for further information

Solvent dilutable repellent

MFR'S DESCRIPTION: Dow Corning "770 Water Repellent" is announced as a new repellent for masonry that can be diluted with plain mineral spirits.

USES: protection of mortar, brick, concrete or other masonry.

SPECS/FEATURES: clear as water. Effectiveness of water resistance given as five years. Material is dilutable in common solvents. As shipped (33% solids), its color is less than 120 on APHA Scale (ASTM D1209-54). At 10% solids its color is less than 50. Available for immediate shipment at competitive prices in any quantity. Test samples on request.

AIA file no. 3-B

MFR: DOW CORNING CORP.

Circle 132 for further information

Water-resistant adhesive

MFR'S DESCRIPTION: "Lion-Bond," a water-resistant organic tile setting adhesive for thin set

installations, has been introduced by Cambridge Tile Mfg. Co.

USES: for bonding ceramic floor or wall tile to any surface—masonry, wallboard or metal.

SPECS/FEATURES: a departure from present latex-type adhesives, product needs only to be mixed with water. Odorless, non-inflammable, cannot stain tile or grout and both tile and tools can be cleaned with water alone, mfr says. No solvent "escape-time" is necessary, therefore grouting can

be done as bond holds tile in position, usually within one hour.

AIA file no. 23-P

MFR: THE CAMBRIDGE TILE MFG. CO.

Circle 133 for further information

Horizontal travel

MFR'S DESCRIPTION: Otis elevator offers the "Trav-o-lator" as a means of horizontal "contour" transportation.

USES: moving masses of peo-



one piece fiberglass deck-type

HAWS series 2500 ... FOR SCHOOL, INSTITUTIONAL, COMMERCIAL AND INDUSTRIAL USE

... a complete deck-top, receptor and fountain unit of reinforced fiberglass, vacuum molded, heat laminated. No cracks, joints or rim for undesirable water accumulation. Units screw easily on prepared frames or cabinets. Choose from five decorator spiderweb colors and white at no extra cost; select HAWS Vandal Proof fixtures for virtually any purpose. Rugged, beautiful, yielding greater sanitation, maintenance ease and service—this is the unit for your project! Check on it: HAWS Series 2500.

Write for detailed specs. And see HAWS Catalog in Sweets Architectural File.

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Circle 107 for further information

products, equipment, materials

ple; for example: city centers, sports stadiums, shopping centers, traffic crossings, etc.

SPECS/FEATURES: "Travelator" is "travel-strip" of cleated surface platforms which move continuously. Handrails provided. System flexible: change from horizontal to inclined plane and back again, can transport people over and under obstacles or from one level to another. System reversible for change in traffic-flow. Exterior and interior use. Unlimited design length. Maximum gradient: 14 degrees. Speed: 135 ft/min. Capacities: 42" width unit carries 12,000 passengers per hr. 32" width unit carries 7,500 passengers per hr. Driving machine enclosed in one end of truss. No separate machine room required. Mfr stresses various safety features.

AIA file no. 35-I-14

MFR: OTIS ELEVATOR CO.

Circle 134 for further information

Suspension system

MFR'S DESCRIPTION: a self-supporting suspension system designed especially for its line of access acoustical tile has been announced by Owens-Corning Fiberglas.

USES: recessed lighting/acoustical grid systems.

SPECS/FEATURES: this access system stated to give the architect increased design freedom and flexibility in recessed lighting and partition locations, both during original installation and later relocation. The system is concealed providing accessibility without exposed metal. There is no increase in installation cost according to the mfr. The need for conventional system supporting channels is eliminated by utilizing heavy gauge T-bar construction with rigid connecting cross bars, assuring parallel splines. The new system is being distributed by W. J. Haertel Co. of Chicago. Fiberglas access tile

will span 24 inches without supporting cross splines and permits ease of access to wiring and ductwork. Each tile is factory kerfed and ship-lapped to conceal supporting members. One size: 12" x 24" x $\frac{3}{4}$ " in five white surface treatments: textured, perforated, random perforated, stria and fresco. Tile can also be used with conventional concealed "Z" systems.

AIA file no. 17-A

MFR: OWENS-CORNING FIBERGLAS CORP.

Circle 135 for further information

Elevated floor system

MFR'S DESCRIPTION: "Met-L-Strut", an elevated, adjustable floor system for data processing rooms requiring a flexible cable arrangement has been developed by Unistrut Products Co.

USES: data processing rooms.

SPECS/FEATURES: grid framework members are $1\frac{5}{8}$ " wide, of 12 ga. steel with pyramid-shaped intumed edges. Attached to the jacks with a patented springheld clamping nut and cap screws. Floor panels are of rigid sandwich construction enclosed in metal, with a tapered aluminum edging to facilitate removal. Standard panels are 3 sf topped with $\frac{1}{8}$ " vinyl tile in variety of colors. System developed to accommodate complex system of power and data transmission cables needed for data processing equipment. Flooring system also makes possible its use for air conditioning or humidity control systems.

AIA file no. 17-A

MFR: UNISTRUT PRODUCTS CO.

Circle 136 for further information

AC/curtain wall

MFR'S DESCRIPTION: Lupton "Comfort Conditioning" unit is announced as an integral part of the actual Lupton Curtain wall system.

USES: skeleton frame structures

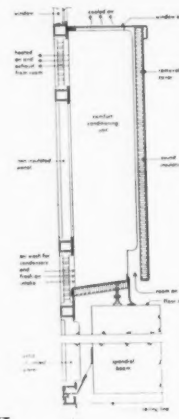
SPECS FEATURES: curtain



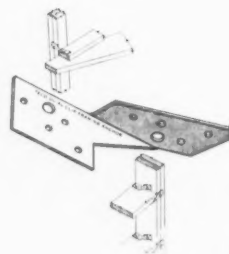
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138

wall includes a system of individually controlled air-conditioning units attached to the interior face of the spandrel panels contained in metal cabinets. AC cabinets have 16 ga. top with fixed louvers, 18 ga. removable front panel with pan-type reinforcement, and 14 ga. bottom pan rib-reinforced to resist vibration. Internal construction 18 ga. AC unit rated capacity (standard ASRE conditions) of 11,500 BTU/hr (Model A) or 8,500 BTU/hr (Model B), CFM delivery 400 (Model A) or 300 (Model B). Throwaway type filters. Automatic thermostatic controls.

AIA file no. 16-E & 30-F-2

MFR: MICHAEL FLYNN MFG. CO.

Circle 137 for further information

Framing anchor

MFR'S DESCRIPTION: An all-purpose, single style framing anchor bearing the trademark, "Teco Du-Al-Clip" is announced by Timber Engineering Company.

USES: connections for secondary structural framing.

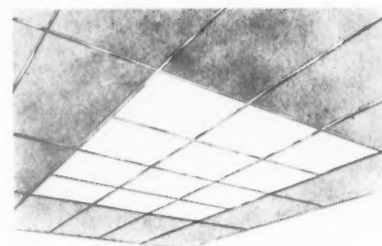
SPECS/FEATURES: the new device is designed to achieve stronger nailed wood connections. Manufactured of 18 ga. zinc coated, corrosion resistant sheet steel for use with nominal 2" lumber. Available in both lefts and rights and will accommodate most framing conditions. Applications: as joist hangers for framing floor and ceiling joists to headers, the anchor grips both headers, providing a stronger connection. Both plates are also gripped in anchoring roof rafters securely against high velocity winds. Used in wall framing, clips provide a rigid joint tying the entire structure against racking and uplift forces. "Pre-fit" projection on the triangular flange speeds installation by permitting the anchor to be "tacked" in place prior to nailing. Units are complete with special nails, and require no bending or twisting before use. Mfr claims the framing



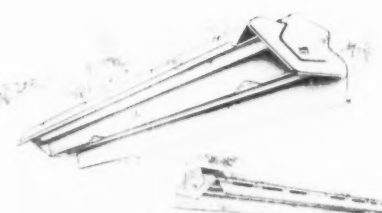
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143

clip eliminates toe-nailing, strap hangers, notching and ledger stripping, and is economical for roof, floor and ceiling and wall framing, as well as stud to concrete connections. Free samples available.

AIA file no. 19-B-5

MFR: TIMBER ENGINEERING CO.

Circle 138 for further information

Threadless lockbolt

MFR'S DESCRIPTION: the "Huckbolt" fastener is offered as a high-tensile, automatically installed threadless lockbolt to replace hot rivets or high-tensile bolts.

USES: erection and assembly of steel structures.

SPECS/FEATURES: used in recent building in the City of Detroit, the lockbolts of $\frac{5}{8}$ " diameter were used in fabricating the girders as well as joining them to the columns. It is of two-piece design, cold-driven by a high-speed hydraulic power tool and has a swaged-on locking collar which according to its developers cannot loosen. The manufacturers hope to prove the use of this fastener in multi-story buildings and in steel bridge construction. They claim that since every fastener is automatically and uniformly installed with built-in tensile preload, "torque" inspection following installation is not required. The structure in which this fastener is being used is the firm's new research center. Installation details and technical data are available.

AIA file no. 13-C-1

MFR: HUCK MANUFACTURING CO.

Circle 139 for further information

Horizontal shoring beam

MFR'S DESCRIPTION: "Pecco-Beam" is offered as a light, sturdy, horizontally telescoping shoring beam that is used to support slab forms for all types of concrete slab construction.

USES: in field during erection.

SPECS/FEATURES: mfr states "Pecco-Beam" can be adjusted and locked to size in a matter of seconds. Only tool required is carpenter's hammer. Unit weighs

8 lb/ft. Over-all simplicity stressed. Available in three basic units which are adjustable to spans from 8'-6" to 27'-7" and can carry uniform distributed weights up to 6,600 lbs.

AIA file no. 4-D-3

MFR: AMERICAN PECCO CORP.

Circle 140 for further information

LIGHTING

Area illumination systems

MFR'S DESCRIPTION: Smithcraft announces its "Area Illumination" (SAI), as a ceiling system that provides unique opportunities for the creation of lighting effects with a custom-made appearance from standard elements.

USES: commercial and institutional interiors.

SPECS/FEATURES: according to mfr system makes possible wide selection of size, pattern, intensity, shielding and periphery, for an almost infinite variety of lighting layouts—all using basic standard equipment. For average sized installations, free from unusual complications, elements may be ordered directly from catalog for modular assembly. No need for formal lighting layouts. System flexible and adaptable for future changes and developments. Diffusing media may be changed or moved at will. Choice of two intensities for given area, because system is available with both T-12 slimline lamps and 800-MA high output lamps. Six different cataloged shielding media or any 2' x 2' lay-in diffusing medium are available.

AIA file no. 31-F-231

MFR: SMITHCRAFT LIGHTING

Circle 141 for further information

Color-coded lighting

MFR'S DESCRIPTION: Edwin F. Guth Co.'s "Wyteliner" units are available with "Kolorkode," a system of safety-code colors applied to the reflectors of industrial luminaires.

USES: plant or factory illumination.

SPECS/FEATURES: units used

to identify: exits, fire protection equipment (red); general aisles, traffic lanes or safe through-pasageways (green); and stairs, curbs, dead ends or dangerous areas (yellow). Specific operation in production line may also be identified. Use restricted to imagination and planning functions. Units are for 430, 800 or 1,500 milliamp operation. The 800 M.A. units use "HO" high output lamps. The 1,500 M.A. fixtures utilize "VHO", "SHO" or power groove lamps. Reflector units offered in white porcelain enamel, baked-on white, or "Al-zak" aluminum. Available with either 10% or 25% uplight, and with 13° or 27° shielding using T-12 lamps.

AIA file no. 31-F-23

MFR: EDWIN F. GUTH CO.

Circle 142 for further information

Glass parasol

MFR'S DESCRIPTION: Lightolier announces its "Gemfire" collection

USES: decorative lighting.

SPECS/FEATURES: ceiling mounted fixture features flaring glass "parasol", striped in Chinese red, chartreuse and gold. White diffusing bowl. Second variation is frosted gold motif applied to clear luminous glass. Models: #4263-18" dia; #4262-21½" dia. Retail prices: \$26.50 and \$30.95.

AIA file no. 31-F-2

MFR: LIGHTOLIER

Circle 143 for further information

Glass crown

MFR'S DESCRIPTION: Lightolier announces a crown design from its new "Gemfire" collection.

USES: decorative lighting.

SPECS/FEATURES: "hugs" ceiling. The onyx colored border is encrusted with jewel-toned oblongs of ruby, emerald, sapphire and topaz colored beads. A companion model offers pure white glass encircled by an iced gold necklace pattern. Approx. retail prices 17" model, \$20.95; 20" model, \$25.40.

AIA file no. 31-F-2

MFR: LIGHTOLIER

Circle 144 for further information

Long Span **M-DECK** Produces Co

INSULATION

Fire-safe pipe insulation

MFR'S DESCRIPTION: with addition of a flame retardant jacket to its line of pipe jacket coverings, Owens-Corning Fiberglas Corp. announces availability of a completely fire-resistant pipe insulation.

USES: piping runs.

SPECS/FEATURES: factory applied around pre-molded and incombustible Fiberglas pipe insulation, "FRJ" (flame retardant jacket) provides vapor barrier jacket composed of foil and craft paper bonded together with flame-extinguishing adhesive and reinforced with Fiberglas strands. Jacket also is multi-purpose barrier material when applied to Fiberglas pipe insulation in that it can be used to wrap hot and cold piping up to 400° F. Impervious to water or weathering and adhesive will not melt or run. First installation to be completed in February, 1959 on three new dormitory buildings of University of Wisconsin, designed by Helmuth, Obata and Kassabaum, St. Louis architects.

AIA file no. 29-B

MFR: OWENS-CORNING
FIBERGLAS CORP.

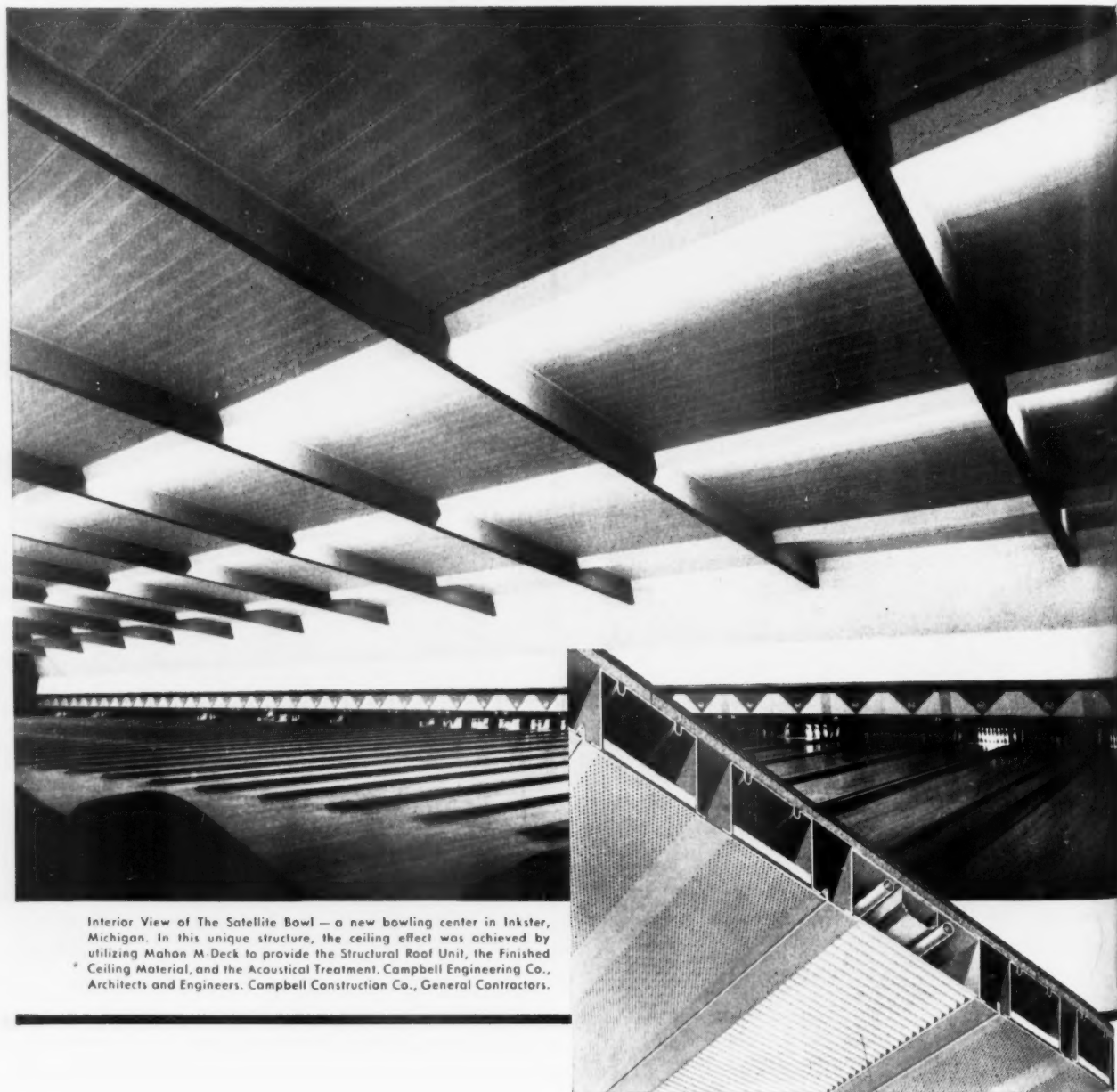
Circle 145 for further information

Blanket insulation

MFR'S DESCRIPTION: Wood Conversion Co. has introduced "Cell-U-Blanket" designed for use in attics of homes heated by electricity.

USES: residential insulation.

SPECS/FEATURES: available in 3½" thickness (Full Thick) with a regular vapor barrier liner, and in a 4½" thickness (Super Thick) with an aluminum foil vapor barrier. In application, blanket is compressed to fit snugly between joists 16" oc and then the flanges can be stapled in place. Insulating mat of material



Interior View of The Satellite Bowl — a new bowling center in Inkster, Michigan. In this unique structure, the ceiling effect was achieved by utilizing Mahon M-Deck to provide the Structural Roof Unit, the Finished Ceiling Material, and the Acoustical Treatment. Campbell Engineering Co., Architects and Engineers. Campbell Construction Co., General Contractors.

Serving the Construction Industry Through Fabrication of Structural Steel, Steel Plate Components, and Building Products of St

s Combined Roof and Acoustical Ceiling in Clear Span Roof Construction!

Roof is Supported by 126 Foot Laminated Wood Arches on
23'-6" Centers; M-Deck Spans from Arch to Arch

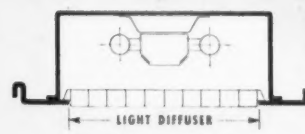
MAHON Long Span M-DECK SECTIONS



SECTION M1-OB
OPEN BEAM DEPTH 3", 4½", 6" or 7½"



SECTION M2SR (Acoustical)
CEL-BEAM DEPTH 3", 4½", 6" or 7½"



SECTION M1T (Troffer)
DEPTH 6" or 7½"



SECTION M2 (Acoustical)
CEL-BEAM DEPTH 1½", 3", 4½", 6" or 7½"

At Left: Cross Section of Long Span M-Deck
Combined Roof-Ceiling with Troffer Lighting.

☆ OTHER MAHON BUILDING PRODUCTS and SERVICES:

- M-Floors (Electrified Cellular Steel Sub-Floors)
- Insulated Metal Curtain Walls
- Underwriters' Rated Metalclad Fire Walls
- Rolling Steel Doors (Standard or Underwriters' Labeled)
- Steel Roof Deck
- Permanent Concrete Floor Forms
- Acoustical and Troffer Forms
- Acoustical Metal Walls and Partitions
- Acoustical Metal Ceilings
- Structural Steel—Fabrication and Erection
- Steel Plate Components—Riveted or Welded

☆ For INFORMATION See SWEET'S FILES
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MAHON

Circle 108 for further information

products, equipment, materials

is highly fire-retardant, states mfr. Both meet ceiling heat loss requirements of NEMA'S, "Manual for Electric House Heating."

AIA file no. 37-C-1

MFR: WOOD CONVERSION CO.
Circle 146 for further information

One-piece pipe insulation

MFR'S DESCRIPTION: Fiber-glas "One-Piece Pipe Insulation" is announced as a multi-purpose product for installation on hot and cold lines with temperatures of from 400° F to 30° below zero, F.

USES: insulation of piping systems.

SPECS/FEATURES: resilient, lightweight pipe insulation molded from fine glass fibers. Product made in one-piece cylinder with single longitudinal seam opened to apply to pipe and closed after in place. Sizes: up to 12", IPS, and in thicknesses from ½" to 2". Manufactured with complete range of service jackets for all types of service installations. Will not burn, is moisture-proof, will not corrode metals, will not shrink and will accommodate line expansion and contraction without cracking.

AIA file no. 29-B

MFR: OWENS-CORNING
FIBERGLAS CORP.

Circle 147 for further information

ELECTRICAL UNITS

Polarized wiring devices

MFR'S DESCRIPTION: the P&S "Polarized" and "Turnlok" lines are offered as completed groups of special electrical wiring devices for locations requiring polarized connection and positive contact regardless of vibration.

USES: special heavy-duty electrical service.

SPECS/FEATURES: polarized receptacles, enclosed in a plastic

ural
ducts of Steel and Aluminum

products, equipment, materials

body and are back and side wired. Polarized caps feature large tapered wireways for simplified wiring. Many are completely armored and finished to resist corrosion. Devices are all furnished in heavy gauge aluminum boxes with bottom and back knockouts. "Turnlok" devices rated at 10 amp and 20 amp; include two, three, and four-wire types. Feature two-piece construction with back or side wiring. Complete catalog of specialty wiring devices available.

AIA file no. 31-C-680

MFR: PASS & SEYMOUR, INC.

Circle 148 for further information

Interchangeable outlet

MFR'S DESCRIPTION: a compact, interchangeable "#1332 Despard" three-wire grounding outlet.

USES: residential, commercial and institutional construction.

SPECS/FEATURES: has screw terminals and parallel slots and a U-shaped grounding terminal with a green hexagonal screw for easy identification. Rated at 15 amps, 125 v., it will take all 125 v. three-wire grounding caps as well as standard polarized or non-polarized parallel blade caps. Enclosed plastic body available in brown or ivory. Outlet must be installed in the end opening of the #1348 Despard camstrap. Outlet grounding strap fits under the #1348 mounting strap, grounding the device to the box.

AIA file no. 31-D

MFR: PASS & SEYMOUR, INC.

Circle 149 for further information

Time control case

MFR'S DESCRIPTION: a new type of case called the "Quick-Out" has been designed as standard housing for all Tork Time switches.

USES: time control of lighting and electrical equipment.

SPECS/FEATURES: mfr states installation is simplified. Entire

time switch mechanism snaps-in or snaps-out of cast at finger touch. Opens from its center hinge providing full access to time switch. Case of metallic gray finish, $4\frac{7}{8}$ " x $4\frac{7}{8}$ " x $8\frac{3}{8}$ ", provided with side, bottom and back knock-outs. Improved case is supplied at no increase in cost of units.

AIA file no. 31-D-4

MFR: TORK TIME CONTROLS, INC.

Circle 150 for further information

ALUMINUM

All-aluminum louvers

MFR'S DESCRIPTION: all-aluminum louvers in $\frac{1}{2}$ " x $\frac{1}{2}$ " x $\frac{1}{2}$ " and 1" x 1" cube cells are now available in 4' widths from Columbia Electric and Mfg. Co.

USES: ceilings, ceiling modules, lighting fixtures and decorative panels.

SPECS/FEATURES: mfr says "Kolbond" process provides product with tremendous rigidity and strength, eliminating breaking and cracking. Louvers produced to exact shape and size, aligning perfectly in any ceiling or troffer installation. Of light gauge aluminum, 4' wide panels can be manufactured to practically any length without sacrificing any degree of rigidity. Cut easily to various shapes or free forms. Available in a number of standard colors, both baked-on enamels or anodized. Custom colors may be specified. Full sets of samples in all standard colors available upon request.

AIA file no. 15-J

MFR: COLUMBIA ELECTRIC AND MFG. CO.

Circle 151 for further information

Decorative aluminum

MFR'S DESCRIPTION: "Spangle Sheet" is announced as a new strikingly different aluminum product for decorative applications.

USES: decorative interior use, lighting fixtures, etc.

SPECS/FEATURES: Alcoa states product is distinguished by an unusual glittering finish sparkling with highlights with contrasting patches of light and dark gray. Pattern of light changes continually, offering many variations of finish. Offered in mill finish, spangle etch finish, plus decorative colors. Thicknesses available range from .032" to .100". Maximum width is 36" and maximum length is 96". Unusual size needs subject to special inquiry.

AIA file no. 23-L

MFR: ALUMINUM COMPANY OF AMERICA

Circle 152 for further information

Aluminum dome

MFR'S DESCRIPTION: Kaiser Aluminum announced sixth stressed-skin aluminum dome structure erected in U.S.

USES: in addition to bank building shown (Citizens State Bank of Oklahoma City designed by architects Bailey, Bozalis, Dickinson and Roloff), as civic auditoriums, theaters-in-round, university gym, and manufacturing facility.

SPECS/FEATURES: stressed-skin aluminum dome shell rests on circular concrete and glass exterior wall. Color and contrast achieved in 625 diamond-shaped panels which are anodized gold, while struts are anodized black. Clear span structure permits completely open interior space uninterrupted by interior columns. Building is 70' high, with interior diameter of 145'. It has 17,500 sf of floor space, plus 9,500 sf in balcony mezzanine and 4,500 sf in the basement. Cost \$500,000.

AIA file no. 13-J

MFR: KAISER ALUMINUM & CHEMICAL SALES INC.

Circle 153 for further information

Aluminum handrail system

MFR'S DESCRIPTION: an aluminum handrail system, combining contemporary styling with ease of installation.

USES: industrial, school, com-



151



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153

mercial and residential applications.

SPECS / FEATURES: rail-to-post assembly, wall bracket connection and base flange are made of precision machined components for accurate fit. Railing will accommodate any stair angle, according to Alcoa. Easy field assembly made possible by friction joints and specially designed mechanical fasteners. Bolt anchorage to walls and floors is concealed; no pipe threading or welding required. "Alumilite" treatment for natural or colored finishes as required.

AIA file no. 14-D-4

MFR: ALUMINUM COMPANY OF AMERICA

Circle 154 for further information

LAB UNITS

Lab fixture

MFR'S DESCRIPTION: model BL-4000 laboratory ground key hose cock is one of the laboratory service fixtures in the new "Lab-Flo" line of T&S Brass and Bronze Works.

USES: in laboratory service.

SPEC / FEATURES: designed for gas, air or vacuum with an identifying plastic color coded index for respective service. Cock is a heavy duty, heavy chrome plated unit, and has integral tapered hose tip with ten serrations for secure hose attachment. Male inlet is $\frac{3}{8}$ " IPS. Detail drawings available on request for this and other models.

AIA file no. 35-E

MFR: T&S BRASS AND BRONZE WORKS, INC.

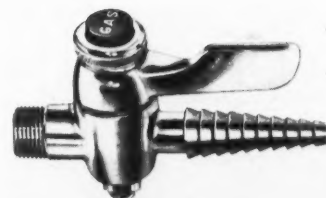
Circle 155 for further information

Epoxy lab sinks

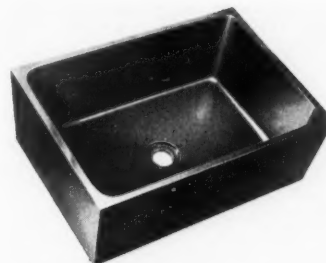
MFR'S DESCRIPTION: the Durcon Co. announces the addition of "Durcon" laboratory sinks to its line.

USES: as laboratory equipment.

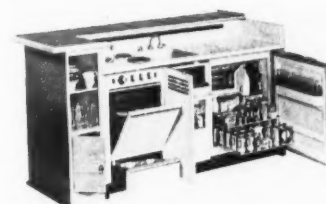
SPECS/FEATURES: "Durcon" formulations are modified epoxy resins. Modifications have improved the resistance of the epoxy to wide variety of corrosive chemicals normally encountered as laboratory reagents, according to the mfr. Sinks are



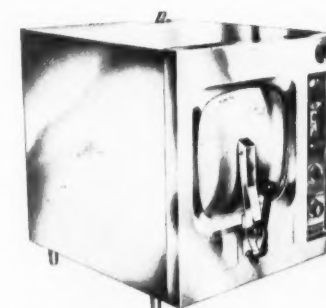
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produced in permanent aluminum molds. Molds insure dimensional stability and proved coved corners, with bottoms dishd to the outlet. This prevents accumulation of contaminants in corners, or liquids in bottom of the sink. Sink is approximately 60% lighter in weight than competitive materials. Mfr stressed installation and shipping cost savings. Lab sinks are claimed impermeable to liquids; will not fail due to thermal shock; will serve without cracking, spalling, or other forms of mechanical failure. Percentage of moisture absorption in a 48-hour period is a maximum of 0.06%. Dimensional stability also stressed. Color: jet black. Available in 12 standard sizes. Special sizes on specification. Bulletin PF/5 is offered containing corrosion resistance chart, a dimension table, installation procedures.

AIA file no. 35-E-1

MFR: THE DURCON CO., INC.

Circle 156 for further information

KITCHEN UNITS

Compact snack-bars

MFR'S DESCRIPTION: Dwyer Products Corp. announces its series of "snack-bars" containing facilities for everything from the teen-age coke party to adult informal parties.

USES: residential recreational use.

SPECS/FEATURES: laminated plastic tops. Contains: refrigerator, work top, range, roll-out drawer, removable sandwich board, glassware and china storage. Made in variety of models. Bar front finishes: dark walnut, light oak and Philippine mahogany. Special finishes available.

AIA file no. 35-C-1

MFR: DWYER PRODUCTS CORP.

Circle 157 for further information

High-compression cooker

MFR'S DESCRIPTION: Hotpoint Co. announces its "jet-" steam High-Compression Steam Cooker, model HC2.

USES: institutional and volume-feeding kitchen systems.

SPECS/FEATURES: mfr emphasizes the speed of the device which provides steam at 15 lbs/psi gauge pressure in an average of 45 seconds. Signal light indicates power input to maintain proper steam generating capacity. Exterior is stainless steel finish. Interior is of cast aluminum. "Calrod (R)" heating units are cast into steam chamber. Safety controls like overheat switch, flood control thermostat, and pressure release valve. Condensate is drained before each cooking cycle. Unit provided with automatic condensate drain. Insulated with glass wool.

AIA file no. 35-C-11

MFR: HOTPOINT CO.

Circle 158 for further information

Electronic kettle

MFR'S DESCRIPTION: Hotpoint Co. offers a trunnion kettle, model HK50, with electronic control.

USES: institutional or volume-feeding kitchen systems.

SPECS/FEATURES: the device was designed specially to handle trend to quality speed-cooking in small quantities in volume-feeding kitchens. Employs a sensing head, a thermistor, held in contact with kettle. Kettle swiveled to permit manual tilting for serving. Base supports not only hinge mechanism, but houses electronic control. Device is portable with cord and plug assembly. Rated 5 kw. Accessories available. For planner of institutional kitchens further details available.

AIA file no. 35-C-11

MFR: HOTPOINT CO.

Circle 159 for further information

HVAC

Unit heater

MFR'S DESCRIPTION: gas-fired unit heaters for spacing heating requirements.

USES: large-area industrial and commercial uses.

SPECS/FEATURES: cabinet: 20 ga. cold-rolled steel with baked-on enamel finish. Four-way air distribution louvers. Controls: automatic pilot with safety

products, equipment, materials

shut-off. Automatic gas valve, 115 v. High-limit control. Adjustable gas pressure. Manual main gas and pilot valves. Optional equipment: thermostat, fan control and air shutters. BTU/H range: 80,000-250,000. Heat exchanger: aluminized steel—18 ga. tubes and 16 ga. headers. Mfr's literature: dimensions and specifications.

AIA file no. 30-C-43

MFR: LENNOX INDUSTRIES, INC.
Circle 160 for further information

Classroom air conditioner

MFR'S DESCRIPTION: Nesbitt "Year-Round Syncretizer" is a classroom air conditioner that combines the winter functions of a unit ventilator (heating, ventilating and natural cooling) with the summer functions of mechanical cooling and dehumidification for complete year-round comfort in today's schools.

USES: elementary/secondary schools, college/university classrooms.

SPECS/FEATURES: large capacity fans operate at low speeds plus acoustic-lined cabinets to provide quiet operation. Units designed for smaller water quantities resulting in lower system and operating costs according to mfr. Also stressed is ease of motor and fan assembly removal, and "pop-out" filters as a maintenance economy. Available in five models: 500 to 1500 CFM. Six standard Nesbitt colors.

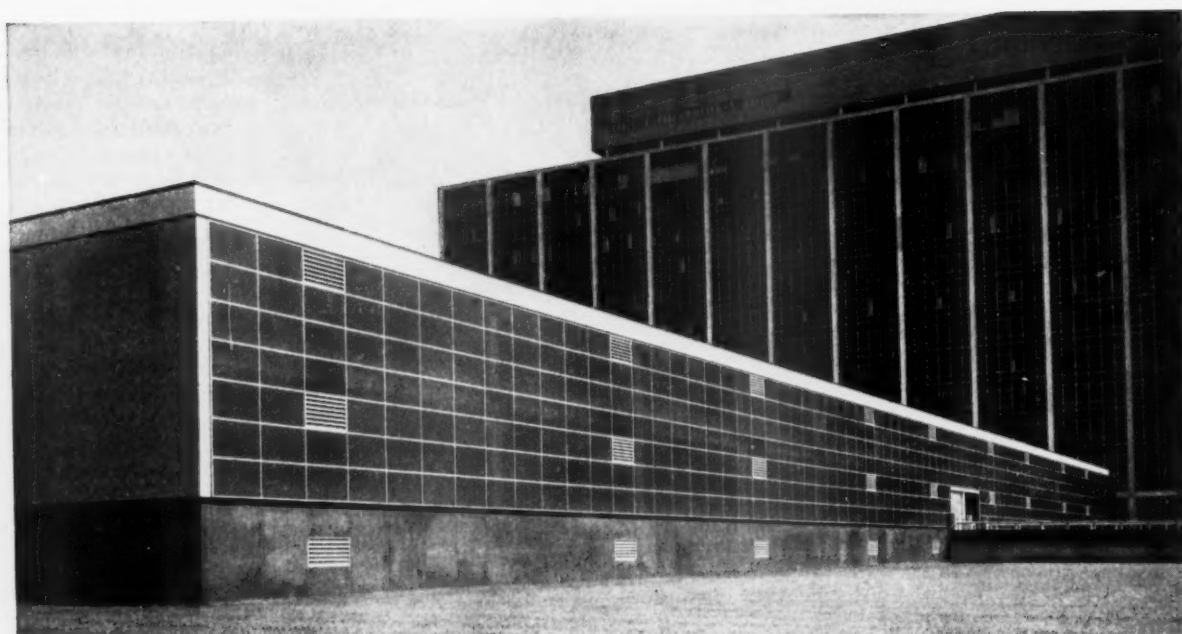
AIA file no. 30-F-1

MFR: JOHN J. NESBITT, INC.
Circle 161 for further information

Induced draft fan

MFR'S DESCRIPTION: Lehigh induced draft fans are announced featuring a unique radiant heat cover between the bearing and the fan housing maintaining a constant, controlled over-fire draft, thereby increasing fuel

MORE *Daylight* PER DOLLAR WITH



Glare reduced Coolite glass achieves high levels of illumination without heat and glare for Ford Motor Company Garage, Dearborn, Michigan.
Glazier: Pittsburgh Plate Glass Co., Detroit

Coolite, Heat Absorbing Glass, glare reduced on the pattern side, provides ideal daylighting for Johnson Motors, Waukegan, Illinois. Architect: Shaw, Metz & Delle. Contractor: Campbell, Laurie & Lautermilch. Glazier: Waukegan Glass Co.



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M I S S I S S I P P I

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TRANSLUCENT GLASS

Modern Buildings Utilize Diffusing Glass to Make the Most of Daylight

These outstanding buildings enjoy more and better daylighting per glazing dollar because translucent glass diffuses daylight deep into interiors to achieve even, comfortable, overall illumination at low cost. Areas are flooded with inexpensive, natural lighting, free of raw glare. Sharp shadows and contrasts are reduced to make seeing tasks easier. Translucent glass helps create a feeling of spaciousness and comfort. Occupants see better, feel better, work better under improved daylighting. The resulting efficiencies and improved morale make it good business to install translucent glass.

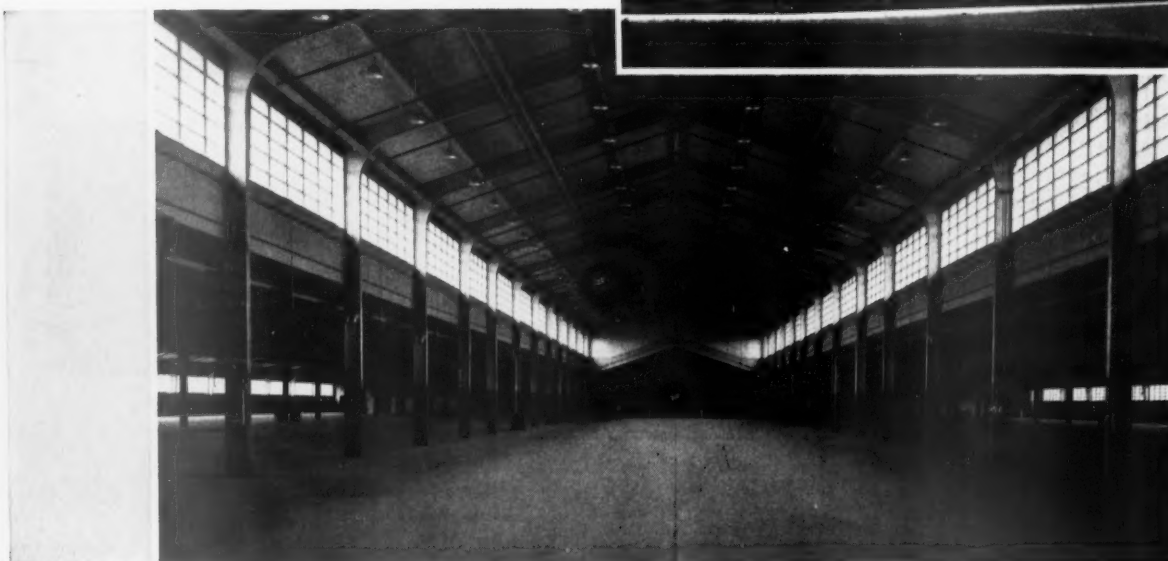
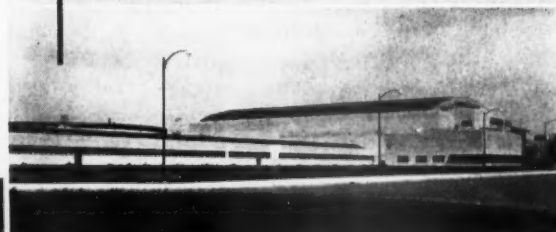
Today's leading architects are taking fullest advantage of translucent glass to achieve interesting, highly functional structures that provide high levels of low cost, natural illumination.

Specify glass by Mississippi. Available in a wide range of patterns and surface finishes to solve any daylighting requirement.



Coolite, Heat Absorbing glass, glare reduced, installed in the Twin Disc Clutch Company, Racine, Wisconsin, floods work areas with conditioned daylight . . . absorbs up to 50% of unwanted solar heat. Glazier: Pittsburgh Plate Glass Co.

35,000 sq. ft. of Smooth Rough glass in the Kentucky Fair and Exposition Center, Louisville, Ky., brightens entire interior. Architect: Fred Elswick and Associates of Louisville. Photo by: Royal Photo Co.



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ROLLED, FIGURED AND WIRED GLASS



Circle 109 for further information

products, equipment, materials

combustion efficiency and eliminating need for large, unsightly stacks.

USES: for hand or mechanically fired boilers.

SPECS/FEATURES: fan is all-welded mild steel integral construction to prevent distortion at high temperatures. Combustion gases handling capacity up to 800° F. Radiant heat cover, together with aluminum heat flinger device, prevent excessive heat radiation and permit use of standard pillow block bearings. Ease of installation stressed. Equipped with manual or automatic damper controls. Fans with 5 hp motors or less equipped with adjustable variable pitch sheaves on motor shaft. Fans with larger motors have fixed drives and speed adjustments made by changing fan or motor sheave. Continuous duty normal torque motors furnished.

AIA file no. 30-D-1

MFR: LEHIGH FAN AND BLOWER
DIV/THE FULLER CO
Circle 162 for further information

Automatic boilers

MFR'S DESCRIPTION: York-Shipley announces its "SPW" line of new automatic boilers designed for hot water systems will deliver either continuous heat at varying rates of heat flow or intermittent heat at fixed rate of heat flow.

USES: medium and large construction.

SPECS/FEATURES: 14 models in capacities of 30 to 500 hp, mfr's certified rating. Standard pressure is 30 psi; standard maximum temperature 250° F. Burners specified for light oil, heavy oil, gas or gas-oil combinations. Features: reverse flow with boiler on suction side of pump; diffuser tube for rapid mixing action and reducing thermal shock; air vent connection allows fast elimination of air

products, equipment, materials

to expansion tank. Butterfly-type blending valves; anti-shock control reduces amount of cold water returned; mounted and wired circulators to provide proper piping and electrical connections. Low-water cut-off. All welded and flanged piping. BTU and firing ratings for individual models available.

AIA file no. 30-C

MFR: YORK-SHIPLEY, INC.

Circle 163 for further information

PLASTICS

Plastic play equipment

MFR'S DESCRIPTION: "play-structures" made of Fiberglas reinforced-plastic offer multiple play functions with maximum safety features.

USES: playgrounds in schools, community centers, shopping centers, day nurseries, etc.

SPECS/FEATURES: designed by two University of Wisconsin professors of art. Plastic playground equipment is abstract in form to stimulate imagination and interest of children. Brightly colored, permanent and lightweight, the forms are resistant to inclement weather, extreme heat and cold. Mfr states equipment will not rot, nor fade in color and requires no painting. Prices of individual units range from \$125.00 to \$1,085.00 and complete playground may cost from \$2,000.00 to \$8,000.00 depending on facilities employed.

AIA file no. 35-F

MFR: CREATIVE PLAYSTRUCTURES, INC.

Circle 164 for further information

Plastic shower head

MFR'S DESCRIPTION: "Perma-Jet" shower head used Du Pont's "Zytel" nylon resin making it tough and unbreakable, yet light and resistant to chemical attack.

USES: residential shower installations.

SPECS/FEATURES: mfr says

shower head gives perfect pattern of water distribution without hollow center, "stray sprays" or mist. A touch of control changes force of spray without adjustment of hot or cold water valves. Design controls clogging from dirt or lime deposits.

AIA file no. 29-H-3

MFR: WEBB INDUSTRIES

Circle 165 for further information

Fire-resistant diffuser

MFR'S DESCRIPTION: "Circul-grid" is announced as a rigid, luminous panel that resists combustion, and meets strict municipal fire codes.

USES: as lighting louvers.

SPECS/FEATURES: twin sheets are individually vacuum-formed and hermetically sealed by electronic welding at thousands of points. May be installed with any inverted tee supporting system, and may be cut for wall edge fit. Available in 23-3/4" square sizes.

AIA file no. 31-F-2

MFR: CIRVAC PLASTICS CO.

Circle 166 for further information

Plastic cold storage door

MFR'S DESCRIPTION: "Jamolite" is offered as the first flush-fitting, lightweight, plastic cold storage door.

USES: mass feeding institutions, especially where women have to open and close refrigerator doors.

SPECS/FEATURES: face of the casing flush with face of the door (no offset), thereby permitting greater freedom of design in location, mounting, color, and appearance. Requires less aisle space to allow for full door swing. Sizes: 2'-6" x 6'-6" to 5'-0" x 6'-6". Types: vertical sliding passing door, horizontal sliding passing door, and horizontal sliding walk-in door. Comprehensive technical sheets available.

AIA file no. 30-F-22

MFR: JAMISON COLD STORAGE DOOR CO.

Circle 167 for further information

Florid plastics

MFR'S DESCRIPTION: actual butterflies, leaves and foliage have been combined with translucent fiberglass reinforced panels to produce a series of colorful patterns in the Decorative Barclite Designers Group.

USES: cabinet doors, shelving, soffits, dividers, etc.

SPECS/FEATURES: shatterproof and virtually maintenance free; material is enhanced by indirect lighting. Can be cut, sawed, drilled, nailed and bolted with ordinary hand tools.

AIA file no. 23-L

MFR: BARCLITE CORP. OF AMERICA

Circle 168 for further information

Decorative plastics

MFR'S DESCRIPTION: "Abaca" pattern is newest addition to Decorative Barclite Designers Group, utilizing hand woven Philippine hemp in panels of translucent, reinforced fiberglass.

USES: decorative panel in shoji screens, room dividers, sliding doors, etc.

SPECS/FEATURES: fiberglass mat and polyester resins make plastic materials shatterproof, weatherproof, and lightweight. Unaffected by extremes of heat or cold. Material maintenance requires only dusting. Material can be cut, sawed, drilled, nailed or bolted with ordinary hand tools.

AIA file no. 23-L

MFR: BARCLITE CORP. OF AMERICA

Circle 169 for further information

HARDWARE

Chrome hardware

MFR'S DESCRIPTION: "floating ring" and "square concave" cabinet pulls are now being offered in polished chrome.

USES: cabinet hardware.

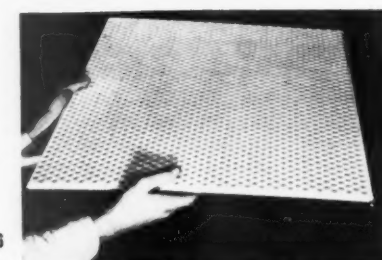
SPECS/FEATURES: made of



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168

pressure-cast alloy; line includes three knob and two pull styles. Retail prices range from 65¢ to 95¢ each.

AIA file no. 27-C

MFR: STANLEY HARDWARE
Circle 170 for further information

Spiral sash balance

MFR'S DESCRIPTION: an intermediate range "Spira-Lift" sash balance has been added to the Caldwell spiral line.

USES: in commercial single and double-hung windows weighing up to 40 lbs.

SPECS/FEATURES: (1) new high-lift torque rod specially designed to give maximum lifting and holding power over full travel of sash (2) tension spring made of extremely high-quality spring steel materials (3) torque-resistant, seamless aluminum tube providing rigidity and vertical linearity. Requires only $\frac{5}{8}$ " plough in sash and will accommodate up to 12' window opening heights.

AIA file no. 27-A

MFR: CALDWELL MFG. CO.
Circle 171 for further information

Gold lock trim finish

MFR'S DESCRIPTION: Schlage Lock Co. announces a gold anodized finish for aluminum lock trim.

USES: residential locksets.

SPECS/FEATURES: satin finish to be offered on entire Schlage line of residential locksets. Trim is slated to be non-tarnishing, durable and highly resistant to corrosion. Finish applied by Alcoa's "Alumilite" process.

AIA file no. 27-B

MFR: SCHLAGE LOCK CO.
Circle 172 for further information

Dome shaped washer

MFR'S DESCRIPTION: A dome-shaped washer with a measured amount of sealing compound adhered to the underside is being made by L. J. Barwood Manufacturing Co., Inc.

USES: to fasten corrugated sheet metals among other types of building assembly.

SPECS/FEATURES: washer available in mild-steel and high-carbon steel, heat treated, as well as stainless steel and other metals and finishes. When pressure is applied, the dome compresses, forcing the sealant to flow in three directions. It will withstand 95 lbs psi air pressure when installed on crown as well as valley of corrugated sheet metal, or 2,000 lbs psi air pressure, when installed on flat sheet metal. Standard screw or bolt sizes through $\frac{1}{2}$ " diameter available; larger sizes on specification.

AIA file no. 12-C-4

MFR: L. J. BARWOOD MFG. CO., INC.
Circle 173 for further information

LIGHTING

Bird cage

MFR'S DESCRIPTION: Lightolier announces its "Holiday" line featuring pendant unit #4111.

USES: decorative lighting.

SPECS/FEATURES: described as an "aerial abstract". Unit's frame decorated with multi-colored strips. Opal glass globe. Pendant adjustable; other models are shallow for ceiling mount. Dimensions: $9\frac{1}{2}$ " wide by $14\frac{1}{2}$ " long. Approx. retail price: \$38.00.

AIA file no. 31-F-2

MFR: LIGHTOLIER
Circle 174 for further information

Surface/pendant units

MFR'S DESCRIPTION: "Versataire" line of 152 different fluorescent light units that may be surface or pendant-mounted.

USES: lighting for schools, offices, libraries, stores, etc.

SPECS/FEATURES: solid or luminous sides available as either direct or indirect type. Mounting may be individual or in continuous lines. Rigid pre-formed louver frame provided with concealed hinges and locks accommodate six different diffusers: "Ventrolens" plastic diffuser; #70 Corning glass diffuser; #93 Corning "Albalite" diffuser; formed acrylic diffusers; poly-

styrene louver with $\frac{1}{2}$ " x $\frac{1}{2}$ " x $\frac{1}{2}$ " cells. Luminaire units are metal, finished baked white synthetic enamel. Lengths: 24", 48" or 96"; 96" units utilize four 48" lamps in tandem. Units utilize 48" rapid or 24" trigger start lamps. UL approved with ETL. CBM certified ballasts for operation on 110-120 v. 60 cycle circuits. Factory wired.

AIA file no. 31-F-23

MFR: LIGHTING PRODUCTS, INC.
Circle 175 for further information

Recessed modular units

MFR'S DESCRIPTION: "Vari-form" line of fluorescent lamp troffers is offered as modular designed recessed luminaire units.

USES: ceiling constructions employing flush lighting systems.

SPECS/FEATURES: a "data-ceiling" chart offered as a reference guide shows correct troffer for exact fit in any of the more than 60 various ceiling constructions. Troffer sizes: 2' x 2' and 2' x 4' utilizing two, three, four, or six 24" or 48" fluorescent lamps. Flush, snap-in, lay-in, or flange construction. Available with a variety of diffusers. Technical literature data.

AIA file no. 31-F-23

MFR: LIGHTING PRODUCTS, INC.
Circle 176 for further information

Corridor light

MFR'S DESCRIPTION: Neo-Ray Products announces its "Corridor Light."

USES: schools, hospitals, offices.

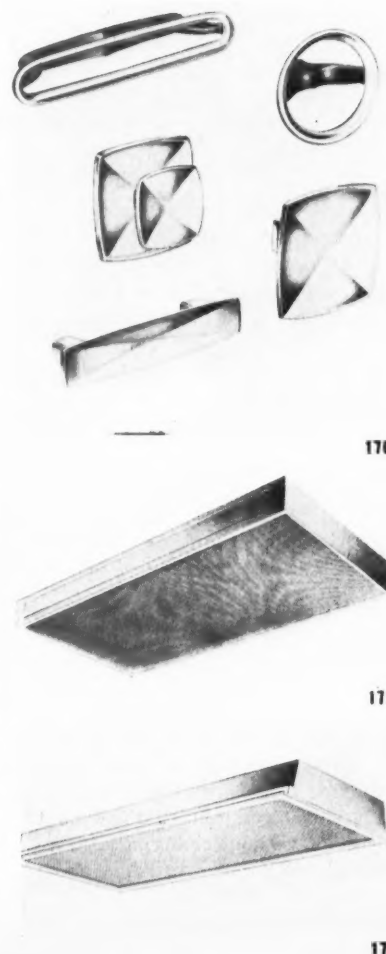
SPECS/FEATURES: unit features a smooth plastic diffuser. Furnished in 4' lengths and 8' tandem sections for individual and continuous runs, and also may be had with gasketing for inhibition of moisture and dirt. Complete literature available.

AIA file no. 31-F-23

MFR: NEO-RAY PRODUCTS, INC.
Circle 177 for further information

Shallow lighting units

MFR'S DESCRIPTION: three series of extremely shallow lighting fixtures are being marketed



products, equipment, materials

under the name of "Waferlume" by Litecontrol Corp.

USES: offices, stores, hospitals.

SPECS/FEATURES: all three series available with two or four 40 watt Rapid Start Lamps and may be row or single-mounted. Series #8700 is surface mounted, using hinged, light-tight plastic dish. Companion series #2000 and #2900 are hinged plastic dish troffers, which recess only 1 1/2" into ceiling. Series #2000 designed for tile, plaster, and T-bar ceilings; series #2900 for grid ceilings. Mfr states that position of lamps in relation to ballast permits cooler operation for increased ballast life and safety. Complete details available.

AIA file no. 31-F-23

MFR: LITECONTROL CORP.

Circle 178 for further information

FLOORING MATERIALS

Asphalt tile textures

MFR'S DESCRIPTION: Azrock Products Division announces a new pattern, "Carpet Tones", a textured effect closely simulating the appearance of carpeting.

USES: commercial, institutional and residential.

SPECS/FEATURES: an asphalt tile; four numbers will be manufactured: K-581, Pebble Beach, brown and white textured effect on tan; K-582 Exmoor, gray and white on green; K-584, St. Andrews, pink, brown and white on gray; K-587, Gleneagle, russet, green, and white on gray. Available in 1/8" thicknesses, 9" x 9" size and priced in the Azrock "K" group. Samples available.

AIA file no. 23-G

MFR: AZROCK PRODUCTS DIV.

Circle 179 for further information

New vinyl-cork patterns

MFR'S DESCRIPTION: five new pattern and shades in Vinyl-Cork tile will be introduced by Dodge Co., Inc.

USES: decorative resilient flooring.

SPECS/FEATURES: patterns are: "Seville", composed of large pieces of natural cork on a cork composition base of contrasting shade. Available in three shades: #481, dark cork on light base (shown); #482, blond cork on a dark base; #480, blond cork on a light base. "Desertone", #464, has light random cork composition base, flecked with small pieces of dark cork and iridescent green chips. "Emeraldtone", #465, flecked with small pieces of dark cork and iridescent green chips also has light random cork base. All tile patterns have laminated surface of Firestone Velon.

AIA file no. 23-G

MFR: DODGE CORK CO., INC.

Circle 180 for further information

Low cost wood flooring

MFR'S DESCRIPTION: Higgins "Hardwood Tile" is offered as a low cost 9" x 9" floor tile manufactured of a single piece of solid hardwood 1/8" thick.

USES: varied building types applied to concrete slab or wood sub-floor.

SPECS/FEATURES: material: pre-shrunk, moisture content removed. Material can be used over old resilient floors, on walls and other surfaces. Mfr states product is priced so low as to be competitive with wood-substitute floors (resilients) and considerably lower in cost than conventional hardwoods.

AIA file no. 19-E-3

MFR: HIGGINS INDUSTRIES, INC.

Circle 181 for further information

MISCELLANY

Height-slant scribe

MFR'S DESCRIPTION: a new "Leroy" scribe that can be adjusted to form template characters of varying heights and slant angles without changing character width is available from Keuffel & Esser Co.

USES: drafting room.

SPECS/FEATURES: can form characters either vertically or slanting at any angle up to 45° forward, and any height from 60% to 150% of size of figures represented on drawing template used. Scribe takes pens from -0000 to -8. Can be used with "Leroy" lettering templates up to size -500 C.

AIA file no. 35-H-3

MFR: KEUFFEL & ESSER CO.

Circle 182 for further information

Transparent tube

MFR'S DESCRIPTION: Rotolite Sales Corporation now supplies a transparent tube for developing with its copying machine.

USES: drafting room reproduction.

SPECS/FEATURES: the transparent tube enables operators to see precisely when the paper development is completed after it has been processed in the "Rotolite" copier, thereby eliminating some guess work. The tube is lightweight and washable and is now provided with a one-piece base and is heavier than the present models in use.

AIA file no. 35-H-3

MFR: ROTOLITE SALES CORP.

Circle 183 for further information

Handcraft tile texture

MFR'S DESCRIPTION: "Horizon Tile" is produced as an American-made glazed ceramic mosaic tile with all the informal beauty and appearance of old world handcraftmanship.

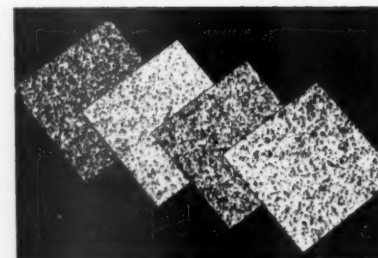
USES: decorative wall finishes

SPECS/FEATURES: in creating tile for architects, careful consideration given to informal irregularity of shape and surface texture, said to be unlike any product presently on market. Styled by Faber Birren, noted color authority, tile available in 58 vivid and subtle colors. Tiles approx. 3/4" x 3/4".

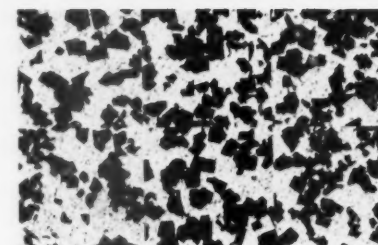
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MFR: THE CAMBRIDGE TILE MFG. CO.

Circle 184 for further information



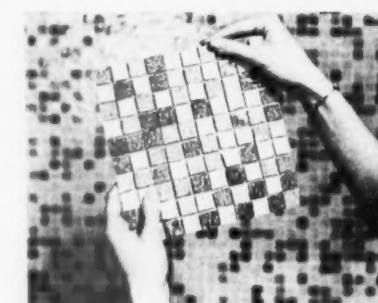
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182



184

THE ANATOMY OF A NEW PROJECT

preview: 2

U.S. MISSION TO THE UNITED NATIONS BUILDING
GENERAL SERVICES ADMINISTRATION, WASHINGTON, D.C.

KELLY & GRUZEN-KAHN and JACOBS

HARWOOD & GOULD

SLOCUM & FULLER

project

client

associated architects

structural engineers

mechanical engineers

General description of program

THE NEW U.S. MISSION TO THE UNITED NATIONS BUILDING, commissioned by the Public Building Service of the General Services Administration, is designed to provide an efficient and secure office space for the United States Mission to the UN. The building will house the offices of the Chief and Deputy Chief of the Mission and the staffs, as well as all auxiliary services required. The nearness of the structure to the United Nations Headquarters complex in New York City was planned in order to increase the efficiency of the Mission's operation and to place it in the most effective location to express its function as an Embassy—being the only U.S. Embassy office building within the Continental United States.

General features

Set back from the property line, the main entrance to the office wing on United Nations Plaza opens into the public lobby which is narrower than the office building above. At the rear wall in the lobby, a sculptured screen will be installed. The entire first floor including the landscaped court between the public lobby and the auditorium wing is brickpaved. The landscaped court is provided with planting beds and a pool which is spanned by a slightly curved concrete bridge to be finished in terrazzo. The screening effect of the court from the lobby circulation will provide a quiet and private reception area.

The spacious main lobby will provide space for the reception of visitors, a guard station and occasional exhibits. Adjoining the courtyard, the auditorium will handle large conferences and meeting of public groups visiting the Mission. A large conference room on the top floor of the office wing will provide space for official conferences.

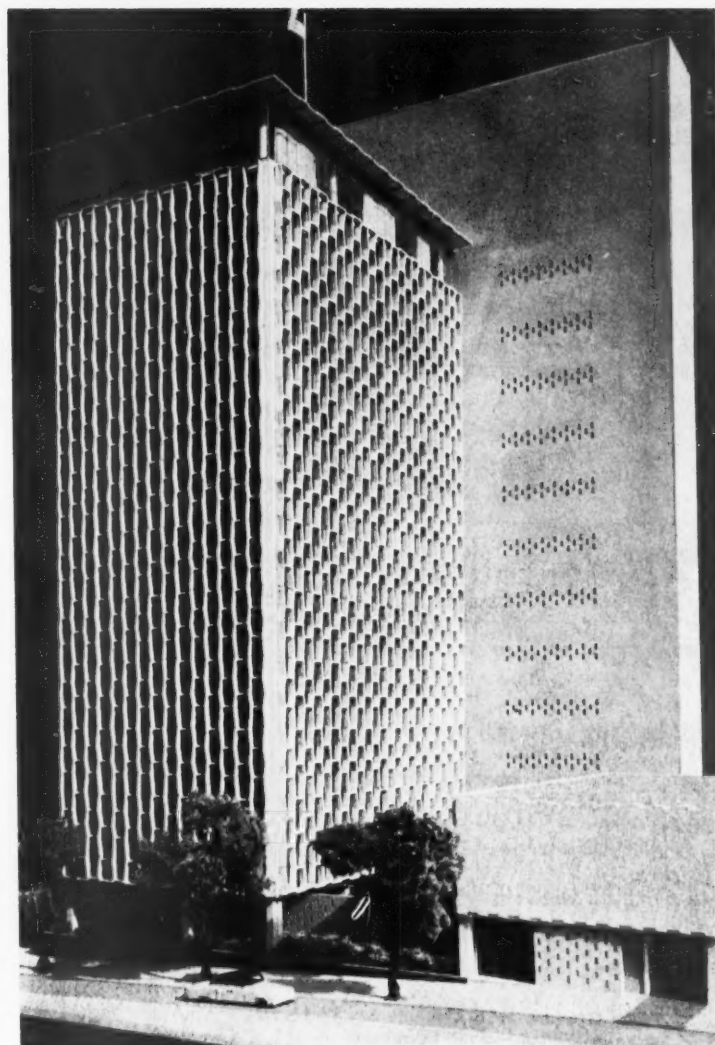
A receptionist will be stationed in main lobby to receive visitors. A side entrance to accommodate special guests and visitors on the secondary street will also give direct access to the courtyard and will be controlled by a guard post. Visitors to the office wing will be registered and escorted to their destination via the elevators to the left, in the service core.

THE SEPARATION OF THE OFFICE WING from the service core was devised to introduce a direct means of access to each floor under well-controlled conditions for security; and for the most efficient and rapid coordination of the various departments of the Mission. Also, by setting the service core apart, a more flexible space arrangement for office layouts was made possible.

Plan elements

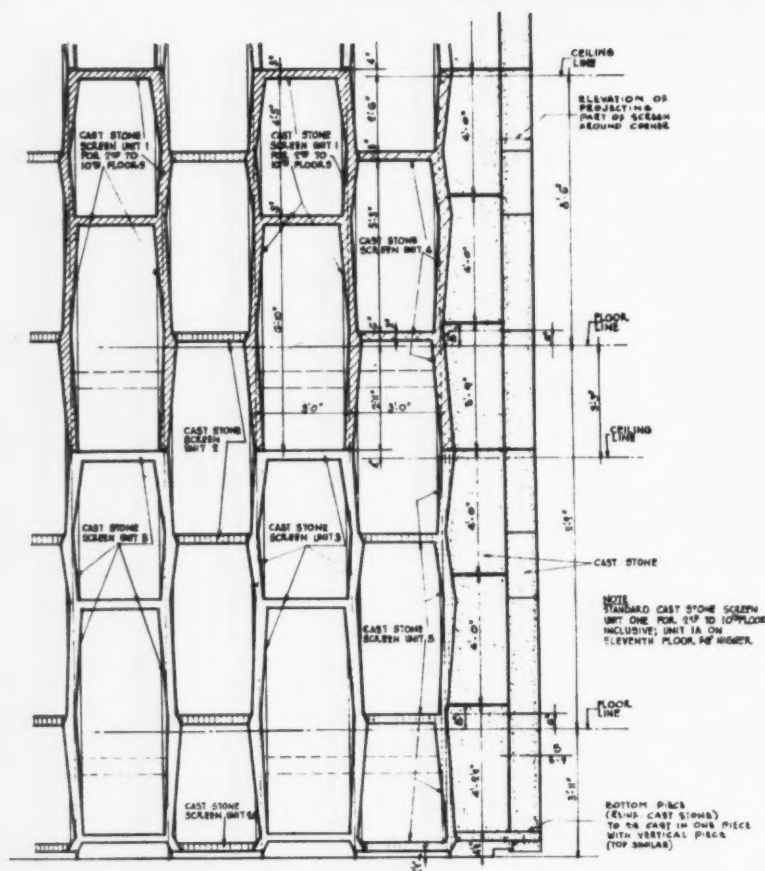
Three basic elements compose the structure:

1. Service core, adjoining the office wing, contains two staircases, three high-speed, gearless, fully automatic elevators, the mechanical shaft, toilets and fan rooms, and a cooling tower and water tank on the roof. Height from the first floor to the top of the coping is 186'-0".
2. Office block consists of 12 floors including a penthouse floor, where a Conference Room and Lounge for social occasions are located. Height 145'-6" from the first floor slab to roof slab. An audio/visual studio will be located in the basement with facilities for television connections to the networks. Underground garage facilities



Model shows Office Block (left) clad in cast stone screen, Auditorium Wing (foreground right) separated by landscaped court, and (at rear), Service Core.

3. Auditorium wing: two-story structure with an Auditorium (seating capacity 280-300 persons) on the second floor. Height 26'-11" from first floor to roof slab, beneath the office wing will provide parking space for a limited number of cars on the basement level. This level is 13'-0" high and covers the entire site area.



PARTIAL ELEVATION OF CAST STONE SCREEN

Special features

1. Cast stone screen at Office Wing: Extent: 10'-0" above first floor slab to 12th floor slab. Material: crushed quartz aggregate and white Portland Cement. All members are reinforced. Compressive strength: 7,500 psi. Absorption factor: 5%. Waterproofing: two coats of colorless water repellent, having a silicone resin base.

The screen units are one story (11'-9") high and 3'-0" from center to center wide. The vertical fins are 19½" deep and 4¾" wide tapering to 2" at the outer face. Two loose horizontal pieces, 12" deep, form a tongued and grooved connection between two units.

Two scalloped band courses form the top and bottom of the screen; the bottom band course provides a lead lined gutter to receive moisture from the horizontal members above.

Method of securing screen to structural system: Each unit is supported on four points at each floor, no load being transmitted on cast stone below:

A 6" x ½" Steel Plate is welded to the cast stone reinforcing. Welded to this plate is a 4" x 8" x ½" steel plate which in turn is bolted (slotted holes to allow for movement) to a short cantilever, welded to the structural beam. This connection—near the bottom of the unit—occurs every 3'-0".

At the top of the unit, a 4" x 8" x ½" plate, welded to the reinforcing rods of the vertical fins, is secured to a structural bracket which in turn is hung from the spandrel beam.

2. Cast stone slabs for Auditorium Wing: The walls of the Auditorium Wing are faced with mesh-reinforced cast stone slabs of a hexagonal design, anchored to masonry cavity wall by conventional means.

3. Office Wing Curtain Walls: The curtain wall behind the stone screen consists of spandrel glass and pivoted windows. The windows are made operable solely for the purpose of window cleaning. On the 12th floor, where there is no screen, the operating windows are of the casement type. Window cleaning hooks are provided on this floor only.

4. Service core windows: The only openings in this brick structure are corridor windows which, however, are not visible from the outside. The brick in front of the windows shows a pattern of perforation, the openings being four brick courses high x ½ brick wide.

Structural information

Structural steel frame of skeleton construction founded on medium hard rock. Design loads as per G.S.A. criteria for gravity and wind. The first floor slab is 8" thick. Typical floor construction is of 4" light weight concrete slab with 2" fill and 1" cement finish to allow for raceways.

Architectural headroom requirements coupled with mechanical clearance requirements restrict framing members to maximum depths of 14" nominal size.

The structure proved to have an awkward shape for balancing torsional and linear rigidities. Because the Service Core is extremely slender and connected to the Main Block only through a narrow link, it was deemed advisable for both economical as well as architectural reasons to design this wing as a horizontal cantilever. Thus, the Main Block building bents were designed to furnish the necessary rigidities to prevent excessive torsional and linear displacements. This was accomplished by horizontally trussing the floor system of the Service Core and by connecting girder to columns with stubs and split-beams in the Main Block.

Roof construction

Service Core: 4" stone concrete slab and 2" fill. Auditorium Wing and Office Wing: 2" insulation; welded roof trusses 44'-4" span @ 29" o.c. at Office Wing; Long span beams 37'-9" @ 32" o.c. at Auditorium Wing.

Heating, Ventilating and Air Conditioning

High velocity perimeter induction system; there is a separate system for areas operating on a 24-hour basis.

Electrical system

Power distribution is accomplished through bus duct risers and underfloor ducts on every floor. Provision is made for an emergency plant.

Low tension electrical systems: sound system, sprinkler alarm, clock and fire alarm, and provision for future closed circuit TV.

Construction cost: \$3,595,620.00

Volume including Basement: 1,182,104 cubic feet

Total gross floor area: 90,595 square feet

Approximate cost per cubic foot: \$3.04

Approximate cost per square foot: \$39.69

literature

Literature cited in this department is available from various manufacturers and associations free of charge. To obtain copies, circle the keyed numbers on the reader service card.

STRUCTURAL UNITS

Open web steel joists

Ceco open-web steel joists, for construction of light-weight, economical and safe floor and roof systems described in catalog #3001-N. Manual contains descriptions and diagrams of various types of open-web steel joists, including shortspan, longspan, and electro-channel types. Tables of available dimensions, properties, and allowable loading, specifications, and recommended handling and erection procedures given. (36 pp.)

AIA file no. 13-G

MFR: CECO STEEL PRODUCTS CORP.

Circle 190 for further information

Laminated structures

A manual of design on the contemporary use of glued laminated wood structures is available. Illustrated by photos, diagrams, load and design procedure tables are two and three hinged arches, tepee frame designs, segment and buttressed segment arches. Also given are details for laminated purlins, connections, laminated beams, specifications, and methods of color selection. (28 pp.)

AIA file no. 19-B-3

MFR: UNIT STRUCTURES, INC.

Circle 191 for further information

Timber fabrication

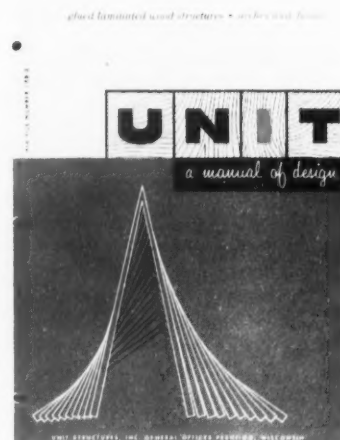
Truss and lamella roof construction and applications of engineered timber construction to commercial and industrial buildings, schools and churches are given in an illustrated booklet which features many different types and uses of prefabricated lumber and timber. Also explained are light roof framing, bridges, mines, railroads, and public utilities requirements. Emphasis is placed on structural strength and versatility of design as well as econo-



193



190



191



192

mies with engineered timber construction. (12 pp.)

AIA file no. 19-B

MFR: ROSBORO LUMBER CO.

Circle 192 for further information

Steel building

Case history bulletin #SX-9758 from Armco Drainage & Metal Products tells how architects met a client's special requirements for a small business office. Details, elevations and floor plans are shown, condensed reference data given, and interior and exterior photographs are illustrated in full color. (6 pp.)

AIA file no. 14-i

MFR: ARMCO DRAINAGE & METAL PRODUCTS, INC.

Circle 193 for further information

Arch frame design

A new typical design #683 for a Teco arch roof frame is offered by Timber Engineering Co. Designed for clear span roof construction of 32' or less, the arch frame has a roof slope of 5" in 12". Teco "Wedge-fit" split ring connectors are used at lapping joints for even distribution of loads at connections. By spacing frames 4' o.c. additional economies are realized in materials and labor. Light roofing and sheathing materials can be used with the combination roof and wall frame. This design available without charge.

AIA file no. 19-B-3

MFR: TIMBER ENGINEERING CO.

Circle 194 for further information

Deep corrugations

Armco Steel Corp. describes how its "Deep Corrugation" sheets support greater loads than standard corrugated sheets; cost reduction factors; weight reduction and savings in purlins. Comparative safe loads and wider purlin spacing are illustrated, and a safe load vs. purlin spacing chart is included. Material available in "Zincgrip" steel and in special "Aluminized" steel Type 2 for extra long service. (2 pp.)

AIA file no. 12-A-3

MFR: ARMCO STEEL CORP.

Circle 195 for further information

MISCELLANY

Ornamental components

This 1959 catalog of stock components for the fabrication and assembly of architectural metal work is offered by

Julius Blum and Co., Inc. Carefully illustrated with line drawings are railing systems, handrail moldings, brackets, ornamental castings, steel tubing and shapes, and many varieties of architectural ornamental metalwork. (20 pp.)

AIA file no. 15

MFR: JULIUS BLUM AND CO., INC.

Circle 196 for further information

Precast facing

This 1959 brochure describes "Mo-Sai" precast facing. The material is two in. thick and is generally offered in sizes from 20 to 60 sf. The physical characteristics, specifications, colors and textures, anchoring and handling methods, and curtain walls are all discussed in the literature. Full color reproductions are shown as well as sectional views and details. Also illustrated with prestige architectural applications. (8 pp.)

AIA file no. 4-K-1

MFR: MO-SAI ASSOCIATES, INC.

Circle 197 for further information

Heat absorbing glass

The 1959 brochure of Mississippi Glass Co. describes "Coolite," a glare reducing glass for heat absorption and conditioned light. The publication sets forth the product's uses in various building types and installation and specification criteria involved. Transmission factors in terms of percentages of total light, dimensions, and suggested specifications given. (14 pp.)

AIA file no. 25-A-3-5-6

MFR: MISSISSIPPI GLASS CO.

Circle 198 for further information

Color illumination manual

This 1959 plastic-bound, file-size, new manual presents color in relation to illumination levels. A subject of increasing importance in contemporary architecture, the material given is authoritatively written by Walter C. Granville, currently president of the Inter-Society Color Council, and a member of the Illuminating Engineering Society. The manual is printed in full color, and covers many phases of color selection for architectural interior design as it relates to various types and levels of lighting. Subject divided into two classifications: color schemes for low-illumination levels and colors recommended for normal and high illumination. Palettes of color

literature

chips are shown, and in addition, packets of color chips are attached in packets for field use. Available to architects without cost.

AIA file no. 25-D-6

MFR: AMERICAN-MARIETTA CO.

Circle 199 for further information

Color in concrete

A concrete color guide is available through C. K. Williams & Co. Methods of introducing oxides of iron to produce various colors in concrete building products are discussed. Textured color chips, formulae, specific pigment recommendations are given. Technical bulletins are also available for controlling color production in cement and concrete products. Hole-punched for ring binder. (8 pp.)

AIA file no. 4

MFR: C. K. WILLIAMS & CO.

Circle 200 for further information

Calendar for pro's

A 1959 calendar, planned and copyrighted specially for use by architects, engineers and other building industry professionals, is offered by Ceco Steel Products Corp. Large spaces are provided for daily memoranda. At end of year, calendar provides a permanent record of the year's activities, as it folds in book form to legal-size file. Folded it may be carried in a briefcase. Copies are free while available. AIA file no. 35-H-4

MFR: CECO STEEL PRODUCTS CORP.

Circle 201 for further information

Soil testing

Normally selling for a dollar, a technical manual, "Unconfined Compression Testing of Cohesive Soils," is available to readers of A/E NEWS at no cost. The manual deals with apparatus, test procedures, interpretation and use of test results. Detail photographs, graphs, charts, recording procedure are also given. (57 pp.)

AIA file no. 1-D

MFR: SOILTEST, INC.

Circle 202 for further information

Fireproofing

This 1959 brochure presents "Cafco Blaze-Shield," designed for fireproofing beams, girders, columns, decks and

ceilings, it is blend of refined asbestos fibers, white mineral fibers, and inorganic binders. Mechanically applied in 1/2" to 3" thicknesses it forms lightweight, fissured, continuous blanket without seams, joints or cracks. Various technical factors discussed. Shown is comparative chart giving details of various types of construction. Graphically gives fire-retardant ratings citing official testing authorities and approvals for recommended applications. (4 pp.)

AIA file no. 21-C-1

MFR: COLUMBIA ACOUSTICS AND FIREPROOFING CO.

Circle 203 for further information

INSULATION

Snap-on insulation

Snap-on, one-piece pipe insulation of fine glass fibers is described and illustrated in Gustin-Bacon Mfg. Co.'s catalog. Recommended thicknesses, heat loss and efficiency data, specifications for dual temperature piping, for heating and plumbing are among the items described, diagrammed and charted. (10 pp.)

AIA file no. 37-D-2

MFR: GUSTIN-BACON MFG. CO.

Circle 204 for further information

Duct insulation

Folder on glass fiber duct liners, coated with black vinyl on one side to resist air erosion, and duct wraps, with or without factory-applied vapor barrier facings, is available. Explained are the advantages, giving full description of products and properties that speed application. Folder also graphically illustrates the thermal efficiency, charts acoustical performance and gives specifications for both liners and wraps. (4 pp.)

AIA file no. 37-D-2

MFR: L.O.F. GLASS FIBERS CO.

Circle 205 for further information

Thermal insulation

This 1959 brochure presents "Cafco Heat-Shield," a thermal insulation for metal buildings, masonry buildings and industrial equipment. Applications, adaptability, condensation control discussed. Coefficients of heat transmission ("U" factors) for various classifications of wall and roof construction included. Outline series of insulation specifications. (4 pp.)

AIA file no. 37-B

MFR: COLUMBIA ACOUSTICS AND FIREPROOFING CO.

Circle 206 for further information

Insulation data

Fundamentals of building insulation given in manual prepared by the Insulation Board Institute. History of insulation, fundamentals of heat transfer, heat loss calculations, uses of insulation, condensation control and building applications are discussed. Included is a technical paper on insulating roof deck slabs and a bibliography of references. (40 pp.)

AIA file no. 37

ASSN: INSULATION BOARD INSTITUTE

Circle 207 for further information

Insulating roof deck

New catalog of Simpson Logging Co. describes its insulating roof deck products, available in four surfaces. Technical data is presented in graphic form giving loading strengths, deflections, weights, radii of curvature, flame resistance, etc. Table of sound absorption coefficients also included. Product designed for contemporary residential structures where exposed beam construction is desired. Manufacturer also indicates its uses in one-story structures; schools, churches, factories, shopping centers, etc. (6 pp.)

AIA file no. 17-A

MFR: SIMPSON LOGGING CO.

Circle 208 for further information

Electric heating insulation

"How to Insulate for Electric Heating," a fact booklet by Tyler Stewart Rogers, technical consultant to Owens-Corning Fiberglas, presents discussion on recommended thicknesses and proper methods of installing insulation in ceilings, walls and floors. Condensation problems, venting requirements, and the insulation of existing houses is shown graphically and pictorially. This material is condensed from a 23-minute color, sound-slide film prepared for distribution by the manufacturer. (32 pp.)

AIA file no. 37-A

MFR: OWENS-CORNING FIBERGLAS CORP.

Circle 209 for further information

PLASTICS

Plastic materials

A comprehensive brochure on the applications, properties, and fabricating techniques of plastic resins is offered by Du Pont. Four classifications of resins are discussed: fluorocarbon, nylon, polyethylene and acrylic; a comparative characteristics chart gives the chemical, mechanical, electrical,

structural and decorative uses. A chart of properties, indicating ASTM testing among others, is also presented. Of broad general interest to architects and engineers. (19 pp.)

AIA file no. 24

MFR: E. I. DU PONT DE NEMOURS & CO.

Circle 210 for further information

Bearing pads

A brochure on bridge and structural bearing pads offered by Voss. Descriptions are given of "Neosorb" molded neoprene and "Sorbtext" impregnated fabric pad materials, ASTM qualifications and thermal properties included. (6 pp.)

AIA file no. 14-J

MFR: VOSS CO.

Circle 211 for further information

Translucent panels

Alsynite offers a folder containing complete specifications on the full range of translucent fiberglass panels including flat panes for window glazing. Leaflet and heat transmission values of 32 different panels. Brief technical test reports by Chemiglas, Inc., scientific research organization, on products flammability, load strength, insulation value, impact and chemical resistance. Other characteristics reviewed. Mfr's folder AE-458 available. (4 pp.)

AIA file no. 20-A-9

MFR: ALSYNITE CO.

Circle 212 for further information

Plastic handrail

The 1959 Bulletin #8101 offers "Colorail," a new thermo-plastic handrail that is lightweight, flexible and is easily adaptable in shape and form. Four color bulletin illustrates colors, and gives dimensions, methods of installation and prices. Handrail is packed in coils of 100 linear feet. (4 pp.)

AIA file no. 14-D-4

MFR: JULIUS BLUM AND CO., INC.

Circle 213 for further information

HVAC

HVAC electronic controls

"Automatic Control Systems Guide for Architects and Engineers" is a new brochure set forth as a guide in designing and planning an automatic control system for most types of heat-

ing, ventilating and air conditioning installations. Three phases of automatic control system planning are discussed: (1) the application, advantages and features of electronic control centers; (2) electric, electronic, and electronic types and component structure; and (3) selecting the power control system. (8 pp.)

AIA file no. 30-E

MFR: BARBER-COLMAN CO.

Circle 214 for further information

Heat exchanger

A new bulletin is available on the Falls Industries' "Impervite Cross-Bore" heat exchanger. An improved "compression head" design is illustrated, and dimensions, capacities, and operating characteristics are provided for all standard models from 21 to 470 sq. ft. of head transfer surface. The "Cross-Bore" is a new type of corrosion-proof impervious graphite heat exchanger which utilizes a "one-piece" heat transfer cylinder instead of the normal tube bundle. Internal and external physical strength, higher working pressures and temperatures, and ease of cleaning are emphasized. (8 pp.)

AIA file no. 30-L

MFR: FALLS INDUSTRIES, INC.

Circle 215 for further information

Aluminum windows & screens

Aluminum windows in commercial and "monumental" double-hung series, and heavy awning styles are cataloged and described in Ceco's bulletin #6013-E. Specifications, construction drawings, and installation details given for 3 groups of window types, as well as accessory hardware and screening. (24 pp.)

AIA file no. 16-E

MFR: CECO STEEL PRODUCTS CORP.

Circle 216 for further information

DOORS/WINDOWS

Concealed door control

The 1959 catalog of "LCN" door closers illustrates a variety of concealed and exposed types for both single and double acting doors in all types of building conditions. Classifications are made according to closing-power, door sizes, radius of swing. Applications, finishes and details are also given. Complete catalog with detailing templates is available. (4 pp.)

AIA file no. 27-B

MFR: LCN CLOSERS, INC.

Circle 217 for further information

Steel windows & screens

Steel windows and screens for public buildings, schools, hospitals, institutional structures and other installations calling for endurance, ample ventilation, and easy operation and screening are described in Ceco's catalog #1001-N. Specifications and structural and installation details given for 1½" intermediate windows in full range of projected, casement, and industrial windows in commercial projected and horizontally pivoted units. Mechanical operators described and detailed. (36 pp.)

AIA file no. 16-E

MFR: CECO STEEL PRODUCTS CORP.

Circle 218 for further information

Flush wood doors

The 1959 edition of Mengel Co.'s catalog describes four series of flush wood doors: stabilized solid core, institutional hollow core, "700" hollow core, residential hollow core. Sectional views, specifications and details given. (8 pp.)

AIA file no. 19-E-1

MFR: THE MENGEL CO.

Circle 219 for further information

WOOD SPECIALTIES

Fir plywood

The 1959 catalog, "Fir Plywood for Product Design," is available from the Douglas Fir Plywood Assn. Included are data on bending radii, deflection, acoustical properties and other physical characteristics; a chart of characteristics and proper use for each grade of material; and recommendations for cutting, drilling, fastening, gluing, nailing and finishing. (8 pp.)

AIA file no. 19-F

ASSN: DOUGLAS FIR PLYWOOD ASSN.

Circle 220 for further information

Plywoods

Plywoods, ranging from standard types to rare and exotic limba, gaboon, teak and other woods from Africa, Asia, Europe and the Philippines are described in a concise, easy-to-read catalog. Sizes, thickness, cuts, veneers and other details of interior, exterior and marine grades are presented. (8 pp.)

AIA file no. 19-F

MFR: NORTH AMERICAN PLYWOOD CORP.

Circle 221 for further information

Red cedar shakes

An illustrated manual of handsplit red cedar shakes—the first of its kind—

all-around access:

ROOF...
CEILING...
SIDEWALK...

• • • Wherever workmen must go, there is a Bilco door to provide easy access. Choose from a wide range of standard units . . . or select special doors shaped and sized to your precise needs.

Ease of installation, permanent weather-sealing, and rugged construction are all part of the Bilco quality tradition. Exclusive design features include built-in spring operators for effortless lifting of even heavy plate doors. Bilco all-metal doors give you freedom of design, too—they fit and blend with any structure.

Specify Bilco doors...design with Bilco doors in mind...with confidence in Bilco lifetime quality.

See our catalog in Sweet's

Architectural & Engineering Files or send for it.

HORIZONTAL SPRING-OPERATED DOORS

• The Bilco Co., New Haven Conn., Dept. A12 •

• Please send me your new catalog on special service doors. •

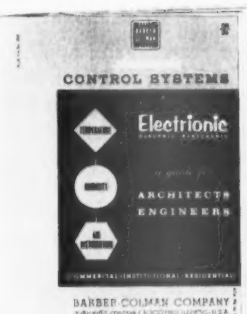
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Circle 110 for further information



214



215



216



218

literature

is available free of charge. Author is Dr. Donald H. Clark, an authority on western red cedar uses. Use of material from early colonial to contemporary work is shown. Recommended methods and material for application are described. (32 pp.)

AIA file no. 19-D-1

ASSN: RED CEDAR SHINGLE BUREAU
Circle 222 for further information

ALUMINUM

Architectural aluminum

The 1959 catalog of Kaiser Aluminum offers a discussion of aluminum alloys, design consideration and limitations of use, an alloy selection guide, properties of architectural aluminum, and information on specialty sheet products. Details, dimensions, suggested specification, and a finish selection table also included. (24 pp.)

AIA file no. 15-J

MFR: KAISER ALUMINUM & CHEMICAL SALES, INC.

Circle 223 for further information

Aluminum soap

A technical service bulletin describes "Witco Alumagel" as a new aluminum soap developed to gel solvents without the use of heat. The bulletin contains technical data on the formation of stable gels from typical non-polar solvents and mixtures of polar and non-polar solvents. Some suggested uses of the product are in paint removers, flat paints, plastisols, rubber cements and fire starters. (2 pp.)

AIA file no. 25-A-4

MFR: WITCO CHEMICAL CO., INC.

Circle 224 for further information

Aluminum uses

Alcoa has issued a new publication discussing architectural, mechanical and electrical power generating stations. Booklet discusses 60 types of applications ranging from switchyard bus conductors, aluminum siding and ducts, to the newer uses such as switchyard structures, die-cast stair treads, and tubes for surface condensers. Bibliography appended to each general heading of architectural,

electrical and mechanical uses. (34 pp.)

AIA file no. 15-J

MFR: ALUMINUM COMPANY OF AMERICA

Circle 225 for further information

ADHESIVES/SEALS

Insulation adhesives

An illustrated catalog describing adhesives for bonding insulation and insulating sealers for the heating, ventilating and building industries is available through 3M. Four typical insulation adhesive and sealer applications are described. The properties, uses, application methods and coverage of products is done in chart form. (4 pp.)

AIA file no. 7-D

MFR: MINNESOTA MINING & MFG. CO.

Circle 226 for further information

Rubber-base sealers

An illustrated catalog describing a new family of polysulphide-rubber-base "Weatherban" sealers for curtain wall construction is offered by 3M. Eleven case histories described. Physical properties and performance data of these sealers are also listed in chart form along with photographs showing application procedures. (4 pp.)

AIA file no. 7-D

MFR: MINNESOTA MINING & MFG. CO.

Circle 227 for further information

PANELING

Plastic-finished panels

The 1959 "Marlite" catalog presents plastic-finished wall and ceiling panels. Various patterns, colors, sizes, installation details are described and illustrated. Contains section on aluminum and color-matched moldings. (8 pp.)

AIA file no. 23-L

MFR: MARSH WALL PRODUCTS, INC.

Circle 228 for further information

Hardboard panels

A guide for architects on "Masonite" panel products is available. Catalog describes various types of panels, VA and FHA specifications, special purpose uses and sizes. Various methods of working the products are given through illustrations and diagrams.

Dimensions, details, applications, hardware accessories are clearly presented in graphic form. (20 pp.)

AIA file no. 23-L

MFR: MASONITE CORP.

Circle 229 for further information

Insulating/hardboards

New brochure on Simpson Logging Co. products contains a chart classifying firm's insulating boards, hardboards and acoustical products. Authoritative standard tests document tensile and compressive strengths, sound absorption values, physical properties, "K" values and chemical resistance. Shown are detailing methods and application for various methods of construction. (24 pp.)

AIA file no. 37-B

MFR: SIMPSON LOGGING CO.

Circle 230 for further information

Plastic panels

Brochure #144 announced by Filon Plastics Corp. is designed specifically to give full information about the manufacturer's Fiberglas reinforced plastic panels. In chart form, it contains technical data, heat and light transmission values, weathering and load carrying charts, a complete list of sizes, colors and corrugations, construction details, and a section on specification procedures. (4 pp.)

AIA file no. 26-A-9

MFR: FILON PLASTICS CORP.

Circle 231 for further information

LIGHTING

Ceiling systems

Three ceiling systems recently introduced by Smithcraft Lighting are described in literature now available. Given is complete information on Smithcraft Area Illumination, a system for the creation of lighting effect with a custom-made appearance from standard elements. Information is given on the most important features, plus mounting details, lighting characteristics, the different shielding media available, over-all dimensions and ordering information. (6 pp. each)

AIA file no. 31-F-231

MFR: SMITHCRAFT LIGHTING

Circle 232 for further information

Lighting techniques

Case histories of modern lighting techniques are illustrated in Curtis Lighting brochure of various architectural applications in contemporary illumination. A large variety of com-

mercial and institutional uses are presented through photographs, descriptions and details. (54 pp.)

AIA file no. 31-F-1

MFR: CURTIS LIGHTING, INC.

Circle 233 for further information

Aluminum reflectors

"Alzak" processed aluminum reflectors available for commercial, industrial, institutional and recreational applications are carefully described in a brochure of specifications and product test data for this specially processed luminaire. Finishes and service characteristics and weather resistance and maintenance are discussed. ASTM processes and test methods described. (12 pp.)

AIA file no. 31-F-24

MFR: CURTIS LIGHTING, INC.

Circle 234 for further information

PORCELAIN ENAMELS

Porcelain enamel panels

Designing for flatness in porcelain enamel panels is detailed and illustrated by four design case studies. Assemblies, insulation, production factors, adhesiveness, and specifications given among other data. (16 pp.)

AIA file no. 17-A

MFR: INGRAM-RICHARDSON MFG. CO.

Circle 235 for further information

Enamels for aluminum

Du Pont through its electrochemicals department offers a series of technical bulletins on low-temperature porcelain enamels, enamel processes, basic metals, enamel compositions, metal cleaning and pretreatment baths, and enamel applications and firing of porcelain enamels for aluminum curtain walls. Offers a valuable guide to specification writers. (26 pp.)

AIA file no. 15-M-1

MFR: E. I. DU PONT DE NEMOURS & CO.

Circle 236 for further information

Architectural porcelain

This 1959 full color catalog describes Seaport Metals' line of architectural porcelain building products. Technical data and installation details offered in addition to information on "Seaport-clad" curtain wall insulated, laminated and assembled panels. Diversified uses in completed construction illustrated. (8 pp.)

AIA file no. 17-3A

MFR: SEAPORCEL METALS, INC.

Circle 237 for further information

MISCELLANY

Sectional lab units

The 1959 catalog of Laboratory Furniture Co. features line of interchangeable "package" units which enable the user to set up a completely equipped laboratory within 24 hours. Illustrated and described are drawers, cupboards, sinks, tables, desks, chairs, storage cabinets, fume hoods, accessory and service fixtures. Installation and maintenance data included. (24 pp.)

AIA file no. 28-A-2

MFR: LABORATORY FURNITURE CO., INC.

Circle 238 for further information

Crystalline glazes/tiles

Wall and floor treatments through the use of crystalline glazes and scored tiles are shown in American Olean's booklet #1020. This full color booklet contains illustrations of installations, in both interior and exterior applications for residential and commercial buildings. Entrance halls, interior murals, building facades, bathrooms and kitchens are among subjects covered. Color chart and typical patterns given. (12 pp.)

AIA file no. 23-A

MFR: AMERICAN-OLEAN TILE CO.

Circle 239 for further information

Compact kitchen units

A variety of compact "single-package" kitchen units of Dwyer Products Corp. are described in brochure. Illustrated with details, sizing, components, required utilities, shipping weights, finishes, and optional accessories. (16 pp.)

AIA file no. 35-C-1

MFR: DWYER PRODUCTS CORP.

Circle 240 for further information

Noise control

An information packet on noise control treatment for bowling alleys is currently being distributed by Owens-Corning Fiberglas Corp. The kit contains architectural specifications, application data, blueprints and installation pictures of "Fiberglas" acoustical and roofing products.

AIA file no. 39-B

MFR: OWENS-CORNING FIBERGLAS CORP.

Circle 241 for further information

Acoustical treatment

This 1959 brochure describes "Cafco Sound-Shield" acoustical treatment. Product designed to provide high sound absorption at all frequencies, is



239



240



241

blend of refined mineral fibers and inorganic binders. Machine applied in 1/4" to 3" thicknesses, it forms a fished, level, continuous blanket which may be textured or colored as desired. Test data on sound absorption given. Methods of application, texture and color selection described. Test data on thermal conductivity, light reflectivity and fire hazard classification given. (4 pp.)

AIA file no. 39-B-1

MFR: COLUMBIA ACOUSTICS AND FIREPROOFING CO.

Circle 242 for further information

HVAC Cooling coils

Chilled-water cooling coils by Halstead & Mitchell, available in a wide range of sizes for central station and zone air conditioning systems, are described in a new bulletin. H&M's chilled-water coils are available in finned heights of 12" to 36" in 3" multiples, and in finned lengths of 24" to 120" in 6" multiples. Coils can be supplied with 1 to 8 rows of depth and with 6, 7, 8, or 10 fins per in. Rating and dimensional data included. (2 pp.)

AIA file no. 30-F-5

MFR: HALSTEAD & MITCHELL

Circle 243 for further information

Water heater specs

Water heater specifications for commercial and industrial application are given in Ruud Mfg. Co.'s brochure. Sizing guides, water heaters, equal flow systems, multi-coil and multi-fin water heaters are discussed and illustrated. Construction specs, specific job applications, controls required, and AGA approvals given. (8 pp.)

AIA file no. 29-D-2

MFR: RUUD MFG. CO.

Circle 244 for further information

Heating and AC equipment

York-Shipley offers its catalog describing heavy duty automatic oil and gas fired domestic and industrial heating equipment. Equipment capacities and specifications given. Illustrations are keyed in describing nomenclature of unit parts. Controls described. (54 pp.)

AIA file no. 30

MFR: YORK-SHIPLEY, INC.

Circle 245 for further information

AC units

Illustrated two-color brochure (Bulletin 9327) describes new line of "Diaflo" unit air conditioners. Features and detailed descriptions are included

for major components such as coils, fans, drain pans, pipe enclosures, filters, damper controls, wall boxes, motors, motor controls, and water control assemblies. (12 pp.)

AIA file no. 30-F

MFR: AMERICAN-STANDARD/AMERICAN BLOWER DIVISION

Circle 246 for further information

Water chillers

Catalog #535 describes Acme Model HE packaged water chillers in sizes from 20 through 60 tons. Smaller size, lighter weight, and reduced cost without sacrifice of reliability and performance are outstanding features of the new models, states manufacturer. Also included are complete description, performance, specification and dimension data. (8 pp.)

AIA file no. 30-F-21

MFR: ACME INDUSTRIES, INC.

Circle 247 for further information

AC air handlers

Catalog #382A released by Acme Industries, Inc., describes Acme Model AC air handlers in capacities from 665 to 19,200 cfm, including performance data, specifications and dimensions. Also covered are accessories such as mixing boxes, face and bypass dampers, coils, filters, humidifiers and other related items. (12 pp.)

AIA file no. 30-F-1 and 2

MFR: ACME INDUSTRIES, INC.

Circle 248 for further information

Multi-zone AC units

Full description, performance data, specifications and dimensions are included in catalog #383A covering Acme multi-zone air conditioners. Units range in size from 4,060 to 19,200 cfm and provide heating, cooling, ventilating, filtering, humidifying and dehumidifying of air for as many as 16 zones. (8 pp.)

AIA file no. 30-F-1 and 2

MFR: ACME INDUSTRIES, INC.

Circle 249 for further information

Copper tubes

Chase Brass & Copper Co. offers its booklet on ways to reduce building costs through the use of copper for plumbing, heating, and air conditioning systems. Comparisons are given of the installed costs of different plumbing systems. (25 pp.)

AIA file no. 29-b-4

MFR: CHASE BRASS & COPPER CO.

Circle 250 for further information

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Circle 111 for further information

names



EUGENE F. MAGENAU, AIA

Alert, boyish looking Gene Magenau brings a fresh enthusiasm to his new role as Secretary for Professional Development for the American Institute of Architects in its Department of Education and Research. This fifty-year-old registered architect from Concord, New Hampshire, represents that large group of architects with offices of less than ten men who each year do many of the nation's new buildings.

Two events influenced Magenau in his move from private practice to the AIA staff position. One was the death of his former partner in 1957 after 22 years of working together. The other was a month's trip to Europe in the spring of 1958 which had such a broadening effect that the old stamping grounds no longer seemed adequate.

A graduate of Dartmouth College in 1930, Magenau spent three years in the M.I.T. school of architecture. After several years of drafting and engineering jobs with various New Hampshire agencies, he opened his own office. The firm of Lyford and Magenau grew from a practice of residential work to one handling all types of commercial and institutional projects. During 1942 and 1951 the firm's practice was interrupted when both partners joined big architectural and engineering offices to work on large defense projects.

An active career with AIA began when Magenau joined in 1945. In 1947 he helped form the New Hampshire Chapter and served as its president from 1951 to 1953. In 1952 he became Secretary-Treasurer of the newly formed New England Regional Council, a post he held for four years. From 1952 until moving to Washington, he was New England member of the National Chapter Affairs Committee.

Author of many pamphlets, articles and reports, Magenau is an experienced specifications writer. He was charter member of the Boston Chapter of the Construction Specifications Institute. He also served on Concord's Zoning Board of Adjustment for five years prior to 1942, and was chairman of the Building Code Board of Appeals from 1950-1958.

Magenau is an avid tennis player and complains of the lack of tennis-playing architects. He will make his new home in the Washington area, with his wife Sally and daughter Genie, a sophomore in high school, while their son Roger completes his sophomore year at the University of New Hampshire.

Projects currently under way by the new Secretary for Professional Development reflect Magenau's interest in the practical aspects of architectural practice. These include organization of an important conference on architectural research to be held at the University of Michigan next March; participation in research advisory service to manufacturers; the preparation of technical reference guides on air pollution and hurricanes; conducting the semi-annual current work survey including revisions in statistical methods designed to correlate with other construction statistics; working on the Index to Architectural Information, one of three major Institute activities in the field of improved specification services; coordinating studies of Standard Filing Systems (AIA Catalog File, Design File, etc.) aimed toward improving their utility for practicing architects as a design tool.

books

Masters of Modern Architecture by John Peter. New York: George Braziller, Inc., 1958. 230 pp., illus. \$15.00

Reviewed by:
Giorgio Cavaglieri, AIA*

In general, the word "master" brings to mind somebody whose work should be carefully studied or who is recognized because of his influence, directly or indirectly, on new generations.

This book takes for granted that the architect of tomorrow will look indiscriminately to all effective works of the architecture of today as something from which a great deal can be learned. There is a danger here of confusing the skillful imitators with the original "masters."

Going through this extremely elegant presentation of masterpieces of photography, I would have liked the author to have grouped them showing first the thought of the original thinker and then, step by step, the evolution of that thought as it passed from hand to hand until finally, down low, it reached the muddy ground of the speculators.

Another possibility would have been to tie together these buildings by building types: houses with houses, skyscrapers with skyscrapers. This was done only sketchily on an index of the last page, rather than in the presentation of the photographs. I do not even mention a geographic gathering as this would have discounted the present day's six-hour distance from Paris to New York.

Still, to read once more the work of seven undisputed "masters" of architecture, after the description of the basic elements of form which produced it, is a pleasure that no practitioner should miss.

*Recipient of the Gold Medal of Honor in Architecture of Architectural League, New York, N. Y., 1956.

(Books Continued on Page 38)

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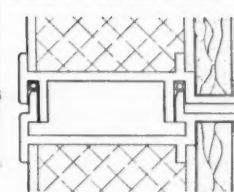
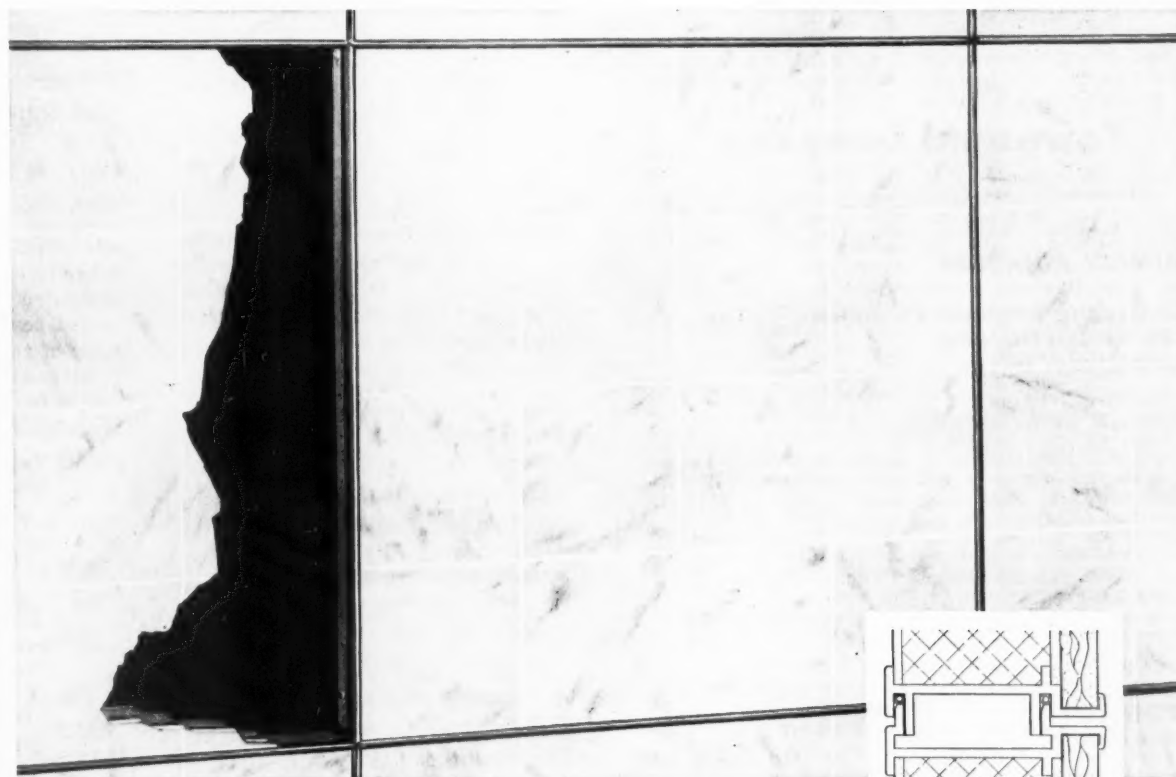
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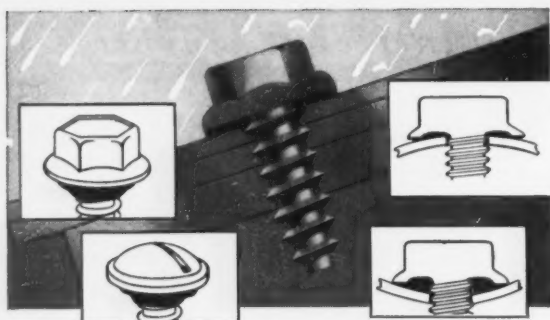
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a watertight and airtight seal. Leaks between the head of the screw and the metal washer are impossible because they are made as one piece.

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SURVEY ADDENDA

Consulting Engineers Council 326 Reisch Building Springfield, Ill.

C. C. Pate, President
Hueston M. Smith, Secretary

Founded in 1956, CEC developed out of associations of consulting engineers established earlier in Chicago, New York and California. CEC aims to promote and safeguard the ethical standards of engineering and to advance the science of engineering through educational and research activities.

Membership: 21 member associations representing nearly 1,200 engineers in private practice.

Publications: Monthly newsletter.

Prestressed Concrete Institute 425 N. E. Fifth St. Boca Raton, Fla.

Peter J. Verna, Jr., President
Jacob O. Whitlock, Secretary-Treasurer

Established in 1954, PCI advances the design and construction of prestressed concrete structures, develops new products, conducts research, holds forums on production and sales promotion, conducts courses in design and inspection.

Membership: 580 organizations; 5,000 members. Open to manufacturers and suppliers of prestressed concrete, engineers, architects, scientists, college professors, students and others affiliated with prestressed concrete.

Publications: *PCI Items*, monthly news bulletin, *PCI Journal* quarterly technical publication, and specifications and standards.

Modern Art: A Pictorial Anthology edited by Charles McCurdy. New York: The Macmillan Co., 1958. 489 pp., 1044 illus. \$9.50

This pictorial treatment of modern art is, in the opinion of this reviewer, the most comprehensive survey available to date. Handsomely mounted, it covers the works of the last 100 years in painting, sculpture, architecture and design.

Essays by well known authorities preface every section and every major movement and group is carefully documented.

Engineering as well as architecture receives a richly detailed presentation. The ground is covered from the Crystal Palace, through the Art Nouveau of Horta and Gaudi, up to the present day engineering wonders of Nervi.

In a section called "The Language of Art," a genuine service is rendered by the inclusion of a bibliography that reaches academic depth. A well-rounded glossary of movements, terms of aesthetic philosophy, and leading figures also is included. The book would be a worthwhile acquisition for student and teacher, scholar and practitioner alike. *K S*

The Living City by Frank Lloyd Wright. New York: Horizon Press, 1958. 224 pp., 58 illus. \$7.50

A statement by Mr. Wright on the inevitable consequences of over-centralization. Graphic solutions presented by the author.

A History of Technology, Vol. III. From the Renaissance to the Industrial Revolution, c. 1500-1750, by Editors Charles Singer, E. J. Holmyard, A. R. Hall, and Trevor I. Williams. New York: Oxford University Press, 1958. xxxvii plus 766 pp., illus. \$26.90

Third in series of projected five volumes of a monumental survey of the developments of Western technology. A scholarly work aiming to provide a definitive history of the subject.

books

Electric Machinery, A coordinated presentation of A-C and D-C machines. New York: John Wiley & Sons, Inc., 1958. 537 pp., illus. \$9.25

Covers both ac and dc machinery with emphasis on common basic principles. Intended as an undergraduate textbook, clearness of presentation invites use as a refresher for practicing engineers.

Heat Exchangers; Applications to Gas Turbines by W. Hrynyszak. New York: Academic Press Inc., 1958. 343 pp., illus. \$10.00

Prestressed Concrete; Theory and Design by R. H. Evans and E. W. Bennett. New York: John Wiley & Sons, Inc., 1958. 294 pp., illus. \$10.00

Concerned with basic principles which apply to all types of prestressed concrete structures, design of simply supported beams, and an introduction to some of the more specialized types of prestressed structures.

Refrigeration and Air Conditioning, by W. F. Stoecker. New York: McGraw-Hill Book Co., Inc., 1958. 397 pp., illus. \$8.00.

Useful as textbook and as a reference for practicing air conditioning and refrigeration engineers on the theory of function of equipment.

Films

How to Insulate for Electric Heating, produced by Owens-Corning Fiberglas Corp., Dept. A/E 54, Toledo 1, Ohio. Available on free loan. Sound-slide film, color, running time: 23 minutes.

Film illustrates recommended thicknesses and proper methods of installing insulation in ceilings, walls and floors. Also discusses condensation problems, venting requirements and insulation of existing houses.

FLOATING BARGE

(Continued from page 9)

soil resistance, the engineers designed horizontal wings or outriggers in the form of reinforced concrete slabs. Continuous in sections around the building, they were hinged to the box girder at the basement floor level, and reached out into the surrounding soil.

The length of the outriggers was designed to create a gradual transition of any difference in soil pressure from under the boat to the surrounding soil. The gradient of pressure did not exceed the equivalent of that of a conservatively assumed angle of repose.

Direct entrance to the basement was achieved by designing the driveway apron as a huge outrigger following a similar principle. Elements of this structural design were architecturally planned, integrated and utilized, resulting in a structure costing little more than ordinary construction on firm ground.

An architectural feature of the project was the use of a large sculptured panel as the solid east wall of the building. The panel was designed as a 110 foot by 30 foot precast, reinforced concrete plate, four to six inches thick, poured face down in a molded sand bed in sections of two foot six inches by ten foot. Each section was individually hung on a structural steel frame, designed to carry from column to column, independently of floor framing, in order to avoid any cracking under live load deflection. Sections were joined in place using keys and grout.

The sculptor, Costantino Nivola, executed the artistic design for the panel shown in the illustration. Although the city of Hartford has a venerable building code, its Building Department cooperated fully by granting permission for structural ultimate strength design. To date, no settlement of the structure has occurred.

DOOR CLOSING DEVICES

digest:2

A NEWS REPORT: The New York architectural firm of Voorhees Walker Smith Smith and Haines recently prepared a SPECIAL REPORT ON DOOR CLOSING DEVICES.

A/E News presents this report here in condensed form as a reference tool.

PURPOSE

- A. Report represents a comparison of available door closing devices, their application, appearance and cost.
- B. Devices are classified by types:
 - Type A: exposed closers
 - Type B: semi-concealed closers
 - Type C: fully-concealed closers
 - Type D: floor closers
 - Type E: spring hinges

RECOMMENDATION

- A. Treatment of doors in an area or building will dictate types of closers selected. For general application, following criteria used for selection:
 - 1. Exposed type closers be used on equipment room doors, doors in service areas and inconspicuous stair doors. Parallel arm closers be used as much as possible in order to eliminate use of brackets.
 - 2. Semi-concealed closers be used on office doors, doors in public areas, and be considered for use on some entrances and vestibule doors.
 - 3. Fully concealed closers be used on doors in specially treated areas, executive offices and most entrance doors. Selection of floor or overhead type closers depends on job conditions.

BASIS OF REPORT

- A. Closers described consist of standard devices applied to standard types of doors and frames. No attempt made to differentiate between application to hollow metal or wood doors and frames since basic requirements are similar except for minor alterations in reinforcement and application.
- B. Specialty features such as hold open devices are available with majority of closers described. Cost summary (given below) does not include allowance for such specialties.
- C. For cost purposes, sizes (medium sized #2 or #3), materials and finishes are comparable for each type of closer.

DESCRIPTION OF DEVICES

- A. Type A: exposed closers
 - 1. Normally installed on pull or hinge side of door. Housing and arms completely exposed under all conditions.
 - 2. Under some conditions, impossible to mount this closer on pull side of door surface, therefore, closer must be mounted on one of several types of brackets secured to push side of door frame or regular arms replaced by parallel arms.

- 3. When bracket mounting, either soffit or corner type is employed, closer is bolted to bracket. This arrangement can occupy space as large as 11" x 12" at corner of door frame. Presents a hazard when person passes close to hinge side of door.
- 4. Use of parallel arms eliminates need for brackets and permits closer to be mounted on surface of the push side of door. Closer travels with door and projects no more than 5" beyond face of door. When in closed position, arms rest in a position parallel to door and frame. Closer closing force is reduced, but loss can be compensated by specifying closer of next larger size than normally required for particular size door.
- 5. Bracket mounting or parallel arm closers used to place closer in least conspicuous location such as, doors swinging into corridors or when inadequate space between door jamb and adjacent partition does not permit surface mounting of closer.
- 6. Closer available from many good sources. Two manufacturers have developed "streamlined" enclosures for some exposed closers but use is limited and units are not currently available competitively.

B. Type B: semi-concealed closers

- 1. Closer is either mortised into top of door or mounted on face of door. When mortised, only small portion of housing exposed. Surface mounting leaves greater area exposed. In either case, exposed portion is neatly enclosed in metal cover plate finished as desired to harmonize or match door and frame finish.
- 2. Mortised installations made when closer can be mounted on pull or hinge side of door. As with exposed units, surface mounting with parallel arms used when conditions prevent installation on pull side. This type never mounted on brackets.
- 3. In conventional mortise application, exposed portion of closer projects only 1 1/4" from face of door as compared with as much as 5" for some exposed type units. Therefore, closer may be used when clearances between door jamb and adjacent partition do not permit use of exposed closers on pull side.

C. Type C: fully concealed closers

- 1. Available in two (2) types. One type is completely mortised into top of door leaving arms exposed. Other type is concealed in head of door frame and no operating parts visible when door is closed.

digest: 2

2. Selection of door or head type concealed unit dependent on degree of concealment desired, initial cost and added cost involved in fabrication of door and frame.
3. Fully concealed units available competitively.
- D. Type D: floor closers
 1. Commonly known as "floor check", this closer installed in floor slab.
 2. Its use for typical doors in building not common due to cost factor. However, entrance doors and doors in specially treated areas employ use of closer extensively.
 3. Available from several sources competitively.
- E. Type E: spring hinges
 1. Simplest type of door closer but has no checking action. Springs incorporated in the hinge design. Should not be used for heavy duty application.
 2. Spring-hydraulic hinges have been developed by one manufacturer. Type consists of not less than one pair of hinges, one incorporating a spring and other a hydraulic checking device. Installation usually consists of two (2) spring units and one (1) hydraulic unit per door. Hinges are mortise type with barrel or hub of 1 9/16" being exposed.
 3. Above hinges are patented and not available competitively.

EVALUATION

- A. Type A-exposed closers merit consideration on basis that it is completely practical to use such closers where appearance not important factor. The installation of such closers, when mounted directly on door, not as objectionable (from point of view of appearance) as when closer mounted on bracket. Furthermore, surface mounting considerably less hazardous than bracket mounted closer since closer travels with door, occupies less space than bracket mounting and does not present fixed hazard of bracket mounted closer. Use of parallel arm closers requires that closer be of size larger than normally required which of course increases initial cost. However, increase is approximately equal to cost of a bracket thereby nullifying any cost disadvantage.
- B. Type B—semi-concealed type closers are unquestionably neater in appearance than exposed types. With mortise application, only small area is visible and this area is neatly covered. Arms still exposed but design neater in appearance than would be found on exposed closers. Added cost involved in use of this type closer is offset by longer maintenance free life and neater appearance. Under normal usage should last the life of the building with only minor maintenance cost. This closer unit is recognized as one of the finest closers available.

- C. Type C—fully concealed closers are becoming extremely popular and desirable because of concealment features. Cost of door mounted units is comparable to semi-concealed type but life expectancy, operation and maintenance does not equal that of one described above. Full concealment, possible with unit installed in head of door frame, compares with floor closers, Type D for appearance and both warrant consideration in specially treated areas.
- D. Conventional spring hinges cannot be compared with other closers described on basis of not being suitable for heavy duty application and absence of any checking action. Spring-hydraulic set is comparatively new and must be proven inservice. Design and construction of spring and hydraulic units are considerably lighter and smaller than found in any of other closers described. On this basis alone, life expectancy under heavy duty application would probably be less than that of other closing devices. Exposed section of barrel is 1 9/16" diameter by 6 3/4" high. Area, when three units are involved, is approximately equal to visible area of exposed closers. Cost factor, \$62.50 per door, is greater than combined cost of most closers and 1 1/2 pairs of hinges.

CONCLUSION

In analyzing function, appearance, cost and application of closers, each type of closer deserves consideration for a particular situation. A final conclusion cannot be made eliminating any of types described. Impractical to eliminate use of exposed closers on basis that they may be unsightly and unattractive since their use in service areas, etc. is economical. Use of brackets, however, can be reduced to a minimum. Added cost of semi-concealed closers is offset by longer life and improved appearance and their use for spaces recommended is justified. Complete concealment of Type D closers is particularly desirable in specially treated areas where appearance is of prime importance and cost only nominally greater for effect achieved. Use of spring type hinges is not generally recommended for standard doors except for cabinet doors and other light duty applications.

COSTS

Tabulated below are estimated costs to the owners of the closers described herein based on medium size #2 or #3 units of comparable size, material and finish applied to doors hung on butts:

Type	Unit cost*	Added cost of door and frame	Total
A. Exposed	\$22.75	none	\$22.75
A. (with bracket)	26.35	none	26.35
A. (parallel arms)	26.00	none	26.00
B. Semi-concealed	37.50	\$4.50	42.00
C. Concealed (in door)	36.00	4.50	40.50
C. Concealed (in head)	45.00	7.50	52.50
D. Floor Closer	50.00	5.00**	55.00
E. Spring	20.00	none	20.00
E. Spring-hydraulic	62.50	none	62.50

* 15% to 20% variation nationally; prices are list less approximately 25%.

** Estimated for forming required pocket for case in floor slab.

index

to advertisers

American Brass Company 7

Borden Metal Products Company 9

The Bilco Company 33

Julius Blum & Company, Inc. 2nd cover

Granco Steel Products Company 3rd cover

Haws Drinking Faucet Company 17

Kaiser Aluminum & Chemical Sales, Inc. 2-3

R. C. Mahon Company 20-21

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calendar

FEB. 1-6 AMERICAN INST OF ELECTRICAL ENGRS: convention, Hotel Statler, NYC.

2-5 SOC OF PLASTICS INDUSTRY: 14th SPI reinforced plastic division conference; Edgewater Beach Hotel, Chicago, Ill.

2-7 ASTM NATIONAL MEETING: committee week, William Penn Hotel, Pittsburgh, Pa.

9-13 AMERICAN SOC OF CIVIL ENGRS: convention, Statler-Hilton, Los Angeles, Calif.

11 FOUR NEW BUILDINGS: shown in models and photographs, Museum of Modern Art, NYC. through April 19.

15-19 AIME: annual meeting, Sheraton-Palace, St. Francis, Drake Hotels, San Francisco, Calif.

16-27 CRAFTSMANSHIP—THE CEILING: FORMS AND TEXTURES: exhibition, Architectural League, NYC.

23-26 AMERICAN CONCRETE INST: annual convention, Statler-Hilton, Los Angeles, Calif.

23-26 AIME: symposium on thermophysical properties: Purdue University, Lafayette, Ind.

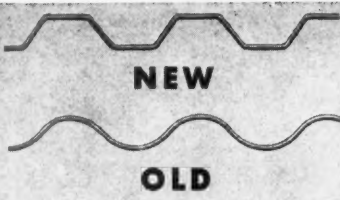
MARCH 13-14 AMERICAN INST OF ARCHITECTS: Atlantic regional meeting, White Sulphur Springs, W. Va.

16-17 ENGINEERING: THE WORK OF PIER LUIGI NERVI: Exhibition with talk March 26 by Dean Burchard, Sch of Humanities, MIT. Architectural League, NYC.

26-27 SOC OF PLASTICS INDUSTRY: 16th Pacific coast section conference, Hotel Del Coronado, Coronado, Calif.

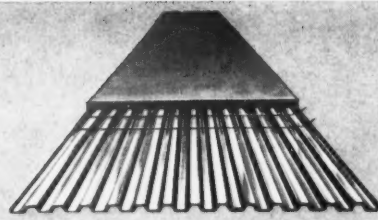
APRIL 2 ARCHITECTURAL SCALE AND ARTS: talk by Paul Rudolph, AIA, chairman, department of architecture, Yale University, Architectural League, NYC.

6-8 BUILDING RESEARCH INST: 8th annual meeting, Penn-Sheraton Hotel, Pittsburgh, Pa.

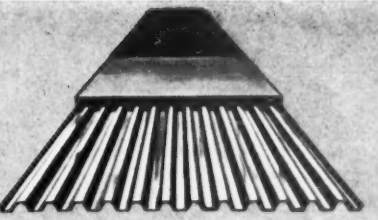


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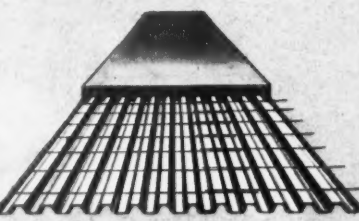
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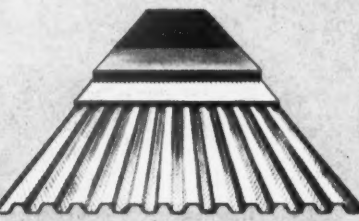
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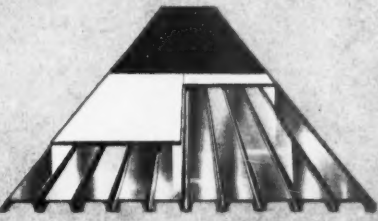
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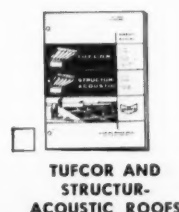
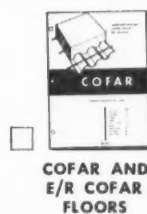
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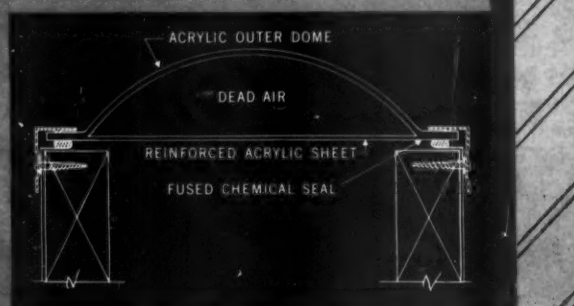


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